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# COMORBID CONDITION IN ULCERATIVE LESIONS OF THE STOMACH AND DUODENUM IN PATIENTS WITH CORONARY HEART DISEASE

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#### **ABSTRACT**

Currently, the problem of comorbid diseases remains important both for science and for practical health care. At the present stage of medical development, the concept of comorbidity is of great importance and requires the study of cardiovascular and gastroduodenal pathologies.

**KEYWORDS:** comorbidity, ischemic heart disease, peptic ulcer of the stomach and duodenum.

#### INTRODUCTION

One of the main features of modern clinical medicine is the fact that various diseases are increasingly losing their mononosological character, acquiring the status of comorbidity. The term " comorbidity (lat. in 1970, the American epidemiologist Alvan Feinstein introduced the concept of an additional clinical picture that already exists or may appear independently, in addition to the current disease, but always differs from it.<sup>[1,3]</sup>

At the present stage of medical development, the concept of comorbidity is reflected in relation to cardiovascular and gastroduodenal pathologies. The problem of further growth in the number of patients with a combination of coronary heart disease (CHD) and peptic ulcer disease (PUD), which has been repeatedly discussed, determines them as "leaders". <sup>[2,4,6]</sup> Based on the combination of certain pathological links and common risk factors, such as Smoking, atherosclerosis, the growth of the specific number of elderly and senile people, genetic predisposition, stressful situations, emotional overstrain, many authors establish the mutual burden and progression of the considered diseases. <sup>[5,7]</sup>

At the present stage, it is still relevant to study new aspects of the pathogenesis of CHD in combination with gastroduodenal pathology, the role of H. pylori in the pathogenesis of this syntropy, and to optimize the treatment of this group of patients. [6,7]

**Purpose of research.** To assess the frequency of comorbid disorders and the development of gastric and duodenal ulcers in patients with coronary heart disease.

## MATERIALS AND METHODS

We examined 146 patients with IHD (acute myocardial infarction (MI)– 12 (8.22%), progressive stenocardia

(PNS) - 68 (46.57%), strenuous angina (NS), functional class III-IV - 66 (45.21%) whose average age was 56.3±2.4 years. Patients with clinically established CHD were checked to endoscopic examination, EFGDS, and the presence of HP infection based on immune-enzyme analysis arteriovenous (IEA), pressure (AP) measurement, ECG, and clinical and biochemical blood tests to verify the diagnosis and correct drug therapy. Endoscopic examination, fibroesophagogastroduodenoscopy (PENTAX 5000 and FUJINON 2500, Japan) was prescribed for patients with clinically established CHD to verify the diagnosis and correct drug therapy. Statistical processing was performed in Excel-2017.

### RESULTS AND DISCUSSION

When admitted to the hospital, 56% of patients complained of anginal pain of typical localization, 28% - abdominal pain of various localization and intensity, 12% - discomfort and heaviness behind the sternum, 4% - General malaise and weakness.

Patients with coronary heart disease received conventional therapy, including heparin, aspirin and clopidogrel (a loading dose with subsequent transition to maintenance).

At initial examination of patients were identified with CHD associated pathology (tab.1), among which DM, dyslipidemia, and osteochondrosis prevailed.

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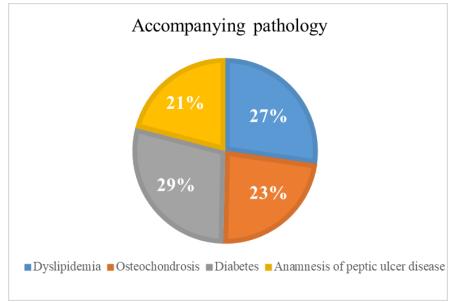


Table 1: The characteristics of the original pathologies in the examined patients (abs).

In table. 2 the data obtained in the study of the frequency of SSP in the examined patients are presented. It can be noted that in the quantitative ratio there is a combination of these pathologies, determined in one patient, due to which the total number of combined diseases increases to 185.6%.

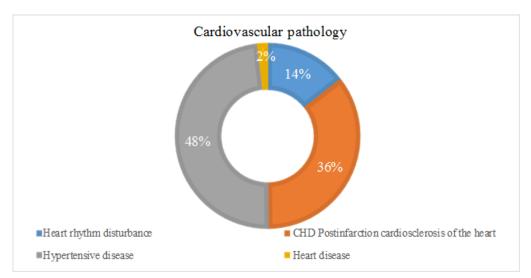


Table 2: Quantitative characteristics of cardiovascular pathology in examined patients (abs)

The accumulation of cases of these pathologies with age was registered in both groups, however, a more noticeable increase is typical for individuals with combined gastric ulcer and DPK, who at the time of inclusion in the study were diagnosed with common osteochondrosis, DM, and dyslipidemia in 71.9% of cases.

Certainly, the interaction between the gastrointestinal tract and the cardiovascular system is of great interest. Proximity location with the heart and common innervation are able to provoke arrhythmias and imitate CHD when the stomach is full, esophageal abnormalities of the type of viscero-visceral reflexes. When studying

the frequency of combined ulcers of both the stomach and DPC (table.3) they were found to be more prevalent in men (18.49%) than in women (5.48%).

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Table 3: Frequency of combined ulcers in examined patients (abs).

Combined ulcer	Males	Females	Total
The number of patients with ulcer and duodenum	27 (77,14%)	8 (22,85%)	35 (100%)
The total number of patients (146)	18,49%	5,48%	23,97%

Establishing the localization of the ulcer process, using the EFGDS method, in the surveyed areas revealed (table. 4) the same frequency of them in men, but more in the antrum and bulb of the DPC (15.75%).

Table 4: Frequency of ulcer localization in examined patients (abs).

Location	Gender		Total
Location	Males	Females	
Cardiac Department+duodenal ulcer	4 (2,74%)	2 (1,37%)	6 (4,13%)
Antral Department+ duodenal ulcer	23 (15,75%)	6 (4,10%)	29 (20%)
Total	27 (77,14%)	8 (22,85%)	35 (23,97%)

The immediate complication of the ulcer process in the examined patients was anemia (table.5). Developing anemia in CHD, as a complication of the ulcerative process of GDZ, leads to hypotension, ischemia of the

GDZ mucosa, which, in turn, causes reverse diffusion of H+, acidosis, depletion of buffer systems, and death of epithelial cells, leading to damage to the integrity of the mucosa. [8]

Table 5. The characteristic frequency of anemia in the elderly with CHD peptic ulcer disease of stomach and duodenum (abs).

1 00	Anemia		No anemia		Total
Age	Males	Females	Males	Females	
55-65	12 (17,64%)	9 (13,24%)	43 (63,24%)	4 (5,8%)	68 (100%)
66-75	9 (25%)	7 (10,29%)	16 (23,5%)	4 (11,1%)	36 (100%)
Total	21 (20,2%)	16 (15,38%)	59 (56,7%)	8 (7,7%)	104 (100%)

Analysis of the results of endoscopic studies in patients with CHD, ulcer and DPC allowed us to state that in patients, mainly in men, there were changes in the type of chronic gastritis (35.6%), in the second place in frequency there was gastroduodenal reflux (14.6%). Acute erosions and ulcers were localized mainly in the stomach, amounting to 13.0% and 8.4%, in the duodenum they were 11.1% and 3.8%, respectively.

In patients with CHD (with and without D), increased gastric mucus formation was detected significantly more often than in patients with SSN or patients without CHD. In these same patients, violations of microcirculation (MC) of the gastric mucosa in the form of petechial were significantly more often visually detected. According to fibroesophagogastroduodenoscopy, atrophic changes in the mucous membrane of all parts of the stomach with impaired innervation and MC were more often observed in patients with IHD, accompanied by antral erosions and signs of pancreatopathy in the presence of D.

Based on the above, we can conclude that CHD, ulcer with diabetes should be considered as multi-level, multifactorial and heterogeneous diseases that naturally combine with each other. The commonality of pathogenetic and etiological processes suggests that their combined course is not accidental and can aggravate the development of the main pathological process, leading to the breakdown of adaptive mechanisms. The solution of medical problems of these nosological forms is impossible without the joint participation of specialists in

cardiology and gastroenterology due to the high prevalence and severity of organ damage in this syntropy, as well as the lack of adequate treatment and prevention without taking into account the specifics of the underlying disease.

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