



Clinical features of gastroduodenal ulcers in patients of elderly and senile age with coronary heart disease

Kodirov Sh S¹, Omonov SH², Usmonova NA³, Nurmuhamedov HK⁴

¹⁻³ Republican Specialized Scientific-Practical Medical Center of Cardiology, Uzbekistan

⁴ Tashkent Pediatric Medical Institute, Uzbekistan

Abstract

One of the central links in the development of tissue dysfunction in elderly and senile people is a violation of their blood supply, of which the gastrointestinal tract is the most vulnerable. 104 patients with CHD were examined: 7 (6,7%) with acute myocardial infarction (MI), 49 (47,11%) with progressive strenuous stenocardia (PSS), and 48 (46,15%) with strenuous stenocardia (SS) functional class III - IV. The average age of the patients was 65.3±2.4 years. The paper uses the endoscopic classification of J. A. Forrest (1974); a three-step classification of the severity of blood loss, determined by clinical and laboratory data. Electrocoagulation, application and injection methods of hemostasis were used for endoscopic hemostasis. Based on the studies conducted in patients with CHD with gastric ulcer and DPK, the so-called "silent ulcer" is observed in 67s, 30% of cases, that is, there is no clear clinical picture of the erosive lesion of GDO. In patients with CHD, single and multiple ulcers (both complicated and uncomplicated) are registered more often in the age group of 55-65 years compared to the age group of 66-74 years (63,56% and 6,43%, respectively). In the treatment of elderly and senile patients with CHD and ulcerative bleeding, emphasis should be placed on hemostasis, the main endoscopic methods for stopping bleeding.

Keywords: ischemic heart disease, gastroduodenal ulcer, gastrointestinal bleeding, elderly and senile age

Introduction

In recent years, the health of elderly and senile people has attracted increasing attention from clinicians. The increase in the number of elderly and senile patients causes many ethical, social, economic, and medical problems in many developed countries. Until now, the problem of determining therapeutic tactics for gastroduodenal bleeding (GDB), including methods of hemostasis, the volume of emergency diagnostic techniques and determining indications for surgical treatment, has not lost relevance [2, 5].

Despite the success in the diagnosis of erosive-ulcerative gastrointestinal bleeding, the expansion of the Arsenal of therapeutic agents and surgical interventions, the success of anesthesiology and resuscitation, the mortality rate among elderly and senile patients with erosive-ulcerative processes of the upper gastrointestinal tract, complicated by bleeding, remains high and varies widely from 3.3 to 12 % [5].

It should be emphasized that one of the Central links in the development of tissue dysfunction with age is a violation of their blood supply. Coronary heart disease significantly disrupts the rate of mucosal purification from the reverse diffusion of hydrogen ions, and in these conditions, the balance between the concentration of hydrogen ions in the lumen of the stomach and the blood flow of the mucous membrane is disturbed. Local hypoxia of its individual sections leads to interstitial edema, acidosis, which occurs as a result of increased capillary permeability observed when the protective barrier of the mucous membrane is damaged [1, 3].

Old age and concomitant diseases affect the outcome and are additional risk factors for relapse [4]. Initially, they reduce the compensatory and regenerative abilities of the body, and, secondly, widespread atherosclerosis prevents

spasm of the arrosied vessel, leading, as a rule, to severe blood loss, and reduces the effectiveness of endoscopic methods of hemostasis [4, 6].

Purpose of research. The aim of the study was to study the features of gastroduodenal ulcers in elderly patients with IHD.

Materials and Methods

104 patients with IHD were examined: 7 (6, 7%) with acute myocardial infarction (MI), 49 (47, 11%) with strenuous angina (SA), 48 (46, 15%) patients with strenuous angina (SA) functional class III-IV. The average age of the patients was 65, 3±2, 4 years. Patients underwent endoscopic examination (FGDS), fecal occult blood, blood pressure measurement (BP), ECG, clinical and biochemical blood tests. Endoscopic examination, including fibroesophagogastroduodenoscopy, was performed using FUJINON 2500 and PENTAX 5000 endoscopes (Japan). The paper uses the endoscopic classification of J. A. Forrest (1974); a three-step classification of the severity of blood loss, determined by clinical and laboratory data.

Electrocoagulation, application and injection methods of hemostasis were used for endoscopic hemostasis.

Statistical processing was performed in the State Medical-2016 program.

Results and Discussion

The distribution of patients by gender and age showed (table. 1) that out of the total number of patients, men were 80 (76, 92%), women – 24 (23, 07%). In the 55- 65 age group, the incidence of CHD in men is almost 4 times higher than in women (52.88% 12,5%).

Table 1: Characteristics of CHD patients with GDO ulcerative lesions by gender and age (abs).

Age	Male	Female	Total
55-65	55 (52, 88%)	13 (12, 5%)	68(65, 38%)
66-75	25 (24, 03%)	11 (10, 57%)	36(34, 61%)
Total	80 (76, 92%)	24 (23, 07%)	104 (100%)

Analysis of nosological forms of IHD by age groups showed (table.2) that the highest proportion was made up of patients with progressive angina (47, 11%) and strenuous angina (46, 15%).

Table 2: Nosological characteristics of patients with CHD (abs).

Age	CHD MI	CHD SA	CHD SA FC III	Total
56-65 лет	6 (5, 76%)	30(28, 84%)	32(30, 76%)	68(65, 38%)
66-75 лет	1(0, 96%)	19(18, 26%)	16(15, 38%)	36(34, 61%)
Total	7 (6, 7%)	49 (47, 11%)	48 (46, 15%)	104 (100%)

The clinical picture of gastropathies in CHD was characterized by an imbalance between symptoms and endoscopic changes (table.3). 34 (32, 69%) patients had a pronounced picture of peptic ulcer disease, with characteristic complaints. In 70 (67, 30%) patients, there were no symptoms of UD ("silent ulcer"), which in most cases alarmed and deepened the diagnostic methods.

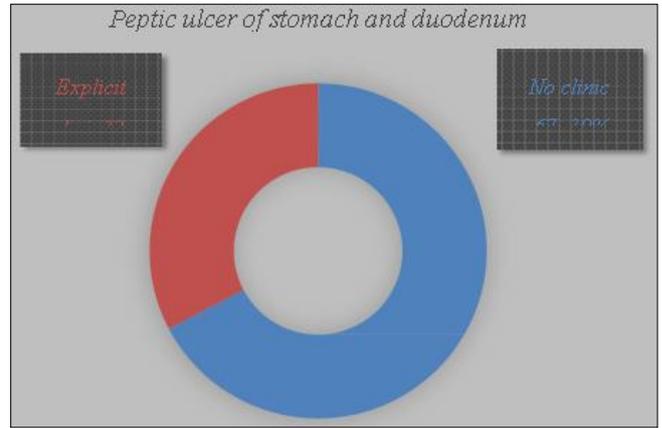


Fig 3: The clinical picture of ulcerative disease of the stomach and duodenum in patients with CHD elderly (abs).

Thus, in patients (n=34) with a clear clinical picture of gastric ulcer and duodenum pain or other dyspeptic disorders, there were observed primordial changes in the mucous membrane of the gastroduodenal zone (MM GDZ), detected by FDGS. On the contrary, in the presence of multiple erosions and ulcers, the disease was often asymptomatic (table.4).

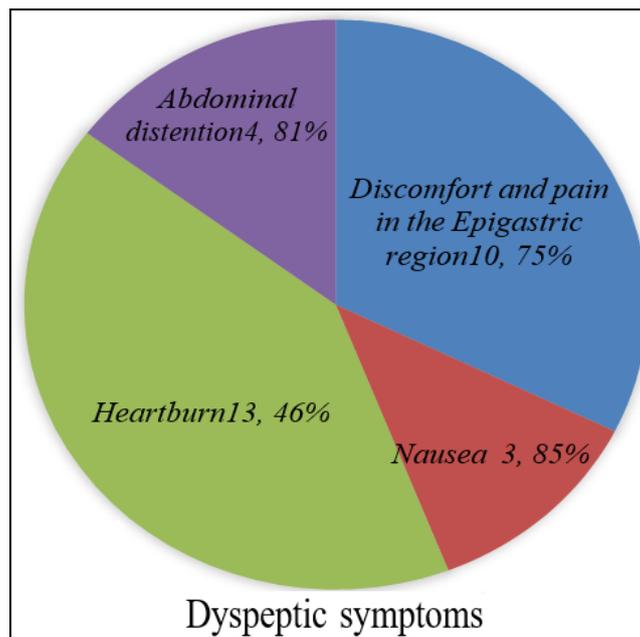


Fig 4: Dyspeptic phenomena in n=34 patients with CHD (abs).

Quantitative characteristics of the ulcerative process were determined during EFGDS in patients with CHD (table.5). Thus, single ulcers were found in 44, 96% of elderly patients, and multiple ulcers were found in 55, 03%. Depending on the age, the features of the ulcerative process were identified. Considering the positivity of these results, it should be noted that single ulcers in 31,78% of cases were typical for people aged 55-65 years, while in 13,17% of cases they were detected in people aged 66-75 years. In turn, multiple ulcers were found in 31, 78% of patients in the 55-65 age group and in 23, 25% of patients aged 66-75 years. It should be noted that in some cases, the ulcerative process was focused on its location both in the stomach and in the duodenum, i.e. if a single ulcer was detected in the stomach, then there

could be 2-3 or more of them in the duodenum, and vice versa.

Table 5: The frequency of ulcerative processes of the stomach and duodenum in persons of senior age with CHD (abs).

Age	Single	Multiple	Total
55-65 aged n= 68 (65, 38%)	41(31, 78%)	41(31, 78%)	82(63, 56%)
66-75 aged n=36 (34, 61%)	17(13, 17%)	30(23, 25%)	47(36, 43%)
Total n=104 (100%)	58 (44, 96%)	71 (55, 03%)	129 (100%)

The immediate stage of research was the study of complicated and uncomplicated bleeding ulcers of the stomach and duodenum in the elderly (tab.6). So, if only 11,62% of complicated single ulcers were detected in people of 55-65 age group, then at the age of 66-75 – 5,42%. This

group was characterized by long-term bleeding from the gastrointestinal tract, anemia of 2 degrees, not noticeable pain in the epigastric region. Single uncomplicated ulcers were found in 20, 15% of patients aged 55-65 and in 7, 75% of patients aged 66-75. In this group, the anemic process was not noticed, and there were no obvious signs of bleeding from the gastrointestinal tract, although the pain in the epigastric region was more intense and longer than in the previous age group.

Considering the frequency of multiple ulcers in the elderly

(table. 6), it can be noted that the number of uncomplicated ulcers was higher in the age group 55-65 than in the group of patients 66-75 years (16,27% and 13,17%, respectively). In turn, multiple complicated ulcers were observed more in patients 55-65 years of age compared to patients aged 66-75 years (15, 5% and 10, 07%, respectively). The final value was the presence of ulcerative process, both complicated and uncomplicated single and multiple ulcers to a greater extent in individuals aged 55-65 years than in the group of 66-74 years of age (63,56% and 6,43%, respectively).

Table 6: The frequency of complicated and uncomplicated ulcerative processes of the stomach and duodenum in persons of advanced age with CHD (abs).

Patients' Age	Single complicated	Single uncomplicated	Multiple complicated	Multiple uncomplicated	Total
55-65 aged	15 (11, 62%)	26 (20, 15%)	20 (15, 5%)	21 (16, 27%)	82 (63, 56%)
66-75 aged	7 (5, 42%)	10 (7, 75%)	13 (10, 07%)	17 (13, 17%)	47 (36, 43%)
Total	23 (17,82)	36 (27, 9%)	33 (25, 58%)	38 (29, 45%)	129 (100%)

The immediate complication of the ulcer process in the examined patients was anemia (table.7). Developing anemia in CHD, as a complication of the ulcerative process of GDZ, leads to hypotension, ischemia MM GDZ, which, in turn, causes reverse diffusion of H+, acidosis, depletion of buffer systems, death of epithelial cells, leading to damage to the integrity of the mucous membrane [5].

Table 7: The characteristic frequency of anemia in the elderly with CHD peptic ulcer disease of stomach and duodenum (abs)

Age	Anemia		No anemia		Total
	Male	Female	Male	Female	
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%)

Fibrogastroduodenoscopy (FGDS) was the main method for diagnosing the source of bleeding, in which signs of hemostasis stability were also evaluated. Patients in severe, unstable state diagnostic FGDs was performed under General anesthesia (intravenous anesthesia with propofol or Diprivan).

In the main group of patients with CHD, endoscopic hemostasis was performed with continued bleeding (Forrest Ia, and b) and its amplification was performed with unstable hemostasis (Forrest IIa, and b). For ulcerative bleeding, we were able to achieve positive results with continued bleeding (ForrestIa, and) and with stopped bleeding with a high risk of recurrence (Forestiya, and b) method endoscopic coagulation. It can be noted that methods of reducing blood flow are unacceptable in patients with CHD of elderly and senile age, due to deep age-related changes.

Additional use of standard anti-ulcer therapy (cold on the epigastric region, gastric probing and anti-ulcer therapy) allowed to achieve stable hemostasis in all 104 patients. None of them had a recurrence of bleeding within the next 7 days.

Thus, the use of endoscopic coagulation in elderly and senile patients with CHD is justified as an addition to standard methods of hemostatic therapy or as an alternative when the latter, for some reason, is not possible. There is no doubt that for ulcerative bleeding in patients with CHD, the emphasis should be placed on local hemostatic therapy, that is, directly on the source of bleeding, but in case of violation of the coagulation system with unstable hemostasis after endoscopic arrest, in some cases, additional correction in the

form of endoscopic coagulation is required. In patients with CHD receiving anticoagulant therapy, which is an important component in the treatment of this pathology, the resulting GB is caused not only by vascular damage, but by certain violations of the mechanisms of hemostasis. Such bleeding can only be stopped by endoscopic methods on the source of the bleeding.

Summary

1. In patients with CHD with gastric ulcer and duodenum the so-called "silent ulcer" is observed in 67, 30% of cases, that is, there is no clear clinical picture of the erosive lesion of GDZ.
2. In patients with CHD, single and multiple ulcers (both complicated and uncomplicated) are registered more often in the age group of 55-65 years compared to the age group of 66- 74 years (63,56% and 6,43%, respectively).
3. In the treatment of patients of elderly and senile age with CHD and peptic ulcer bleeding, the focus should be placed on hemostasis, basic the endoscopic methods of stop bleeding.

References

1. Zvenigorodskaya LA, Bondarenko EYu, Morozov IA, Chikunova BZ. Peptic ulcer in the elderly: clinical features and significance of helicobacterpylori. Clinical gerontology, 2007; 1:9-14.
2. Zyulyaeva TP, Babaev MA, Eremenko AA, Zhbanov IV, Molochkov AV. Features of the course of the postoperative period in patients with CHD older than 70 years after myocardial revascularization operations. Intensive care: traditions and innovations. Anesthesiology and reanimation, 2012: 2:73-78.
3. Kalinkin MN, Osadchiy VA, Bukanova TYu. Clinical and morphological features of inflammatory-atrophic changes in the gastroduodenal zone in elderly patients with congestive heart failure, concomitant coronary heart disease, and the role of microcirculation disorders, hemostasis, and gastric secretion in their development. Clinical gerontology, 2015; (3-4):19-21.
4. Khokhlova EE, Zayratyants OV, Tarasova LB, Lavrova EN, Shepeleva Yu. a. Erosive and ulcerative processes in the stomach and duodenum in women with the development of myocardial infarction. Women's health problems. 2013: 3(8):60-66.

5. Chernyakhovskaya NE, Povalyaev AV, Lyashenko GA. Etiopathogenesis of erosive and ulcerative processes in the esophagus, stomach and duodenum in elderly and senile patients. *Experimental and clinical gastroenterology*. 2015; 116(4):48-50.
6. Shugaev AI, Zemlyanoy VP, Sukhomlin AK, Krasavtseva LV. Features of diagnosis and treatment of ulcerative bleeding in elderly and senile patients with acute coronary syndrome. *Bulletin of the St. Petersburg medical Academy of postgraduate education*, 2010, 80-83.
7. Shikh EV, Ismagilov ZHM, Demidova OA. Safety of combined pharmacotherapy in elderly patients. *Statements ncesmp*. 2017; 7(1):47-49.