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FEATURES OF THE CLINICAL COURSE AND ELECTROCARDIOGAPHY DATA OF CORONARY HEART DISEASE IN MEN IN YOUNG AND ELDERLY AGE

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ABSTRACT

This article analyzes the clinical features of the course and electrocardiographic (ECG) changes in coronary heart disease (CHD) in men at a young and old age. The study included 230 patients with coronary artery disease. All patients depending on age were divided into 2 groups: the 1st group included 126 young patients, the 2nd group included 104 elderly patients. The main diagnostic methods were patient interviews, ECG, Holter monitoring. According to the results of the study, it was found that the occurrence of anginal attacks from 6 to 8 times during the day was observed in 85 (67.5%) patients of the 1st group, in 82 (78.8%) patients in the 2nd group, which indicated about the severity of the disease.

Introduction

At present, the priority cause of annual mortality in 25-50% of cases worldwide continues to be occupied by cardiovascular diseases (CVD), and the proportion of mortality from coronary heart disease (CHD) in this case is more than 7 million people, which is 12.8% of cases [10, 12]. According to many studies, recently around the world there has been a continuous upward trend in the number of young patients with coronary artery disease and this disease is an important socio-economic problem due to early disability and early mortality [1,5]. At the same time, morbidity and mortality among young people is growing and prevails among males. According to many studies, mortality at a young age in men at a young age compared with women of this age is 4.7 times, from coronary heart disease 7.2 times and from AMI 9.1 times more [3, 14]. Since young people are the bulk of the working population, disability and mortality of these people is an urgent medical and social problem [6]. IHD, which manifested in men at a young age, differs from the elderly in clinical manifestations and prognosis of the disease.

In clinical practice, young patients with coronary artery disease most often experience episodes of stable angina pectoris, unstable angina pectoris (UAS), acute coronary syndrome (ACS), acute myocardial infarction (AMI) and sudden cardiac death [2,3]. Already at the age of 30

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to 39 years, all forms of coronary heart disease occur, at the age of 40 to 49 years, every tenth patient has signs of this disease, and after 50 years, every fourth suffers from this disease [4,7].

The manifestation of coronary artery disease at a young age has its own clinical features, since young patients with complaints of retrosternal pain much less often go to doctors compared to the elderly [6,9], in addition, these men have anamnesis data and characteristics of chest pain rarely indicates ischemic myocardial damage [8, 15]. In most patients at a young age, clinical manifestations continued for several days, and ischemic signs in the myocardium on the electrocardiogram (ECG) appeared immediately after an anginal attack [2,10].

IHD is myocardial damage caused by impaired coronary circulation as a result of an imbalance between coronary blood flow and the metabolic needs of the heart muscle [11,14]. The discomfort that occurs when there is a lack of oxygen in the heart muscle is called angina pectoris. It is a clinical syndrome characterized by discomfort in the chest, jaw, shoulder, back, or arms, which is usually exacerbated by physical exertion or emotional stress and quickly disappears after rest or nitroglycerin [12, 13].

Thus, despite the variety of causes and characteristics of the course of IHD in young people, the process of developing the disease is always individual. A better understanding of the causes of CHD in young patients, depending on the etiopathogenetic, clinical indicators and the degree of the course of the disease, is an important problem for obtaining additional information for individual treatment and prevention of various complications.

The purpose of the study: to study the features of the clinical course and electrocardiographic (ECG) data of coronary artery disease in men at a young and old age.

Material and methods of research: on the basis of the Samarkand branch of the Republican Scientific Center for Emergency Medical Care (SF RSCEMC) from 2018 to 2021. 230 patients with IHD were examined. The patients were divided into 2 groups. The first group consisted of 126 patients at a young age. The second group consisted of 104 elderly patients. The control group consisted of 110 practically healthy volunteers (Fig. 1).

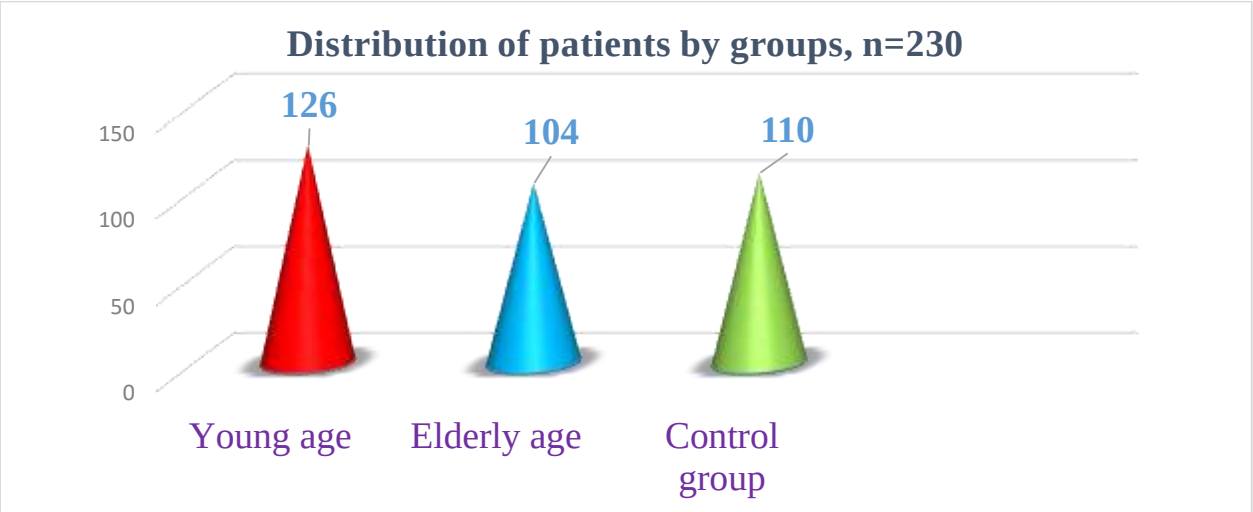

Fig.1. Distribution of patients into groups depending on age.

All patients underwent an assessment of clinical and anamnestic data. When collecting an anamnesis in men, the presence of coronary artery disease (previous myocardial infarction (MI), stable angina, unstable angina of exertion or rest) was ascertained. When questioning the patient, attention was paid to the period preceding the development of coronary artery disease, as well as to the factors that provoked the development of this disease (excessive physical activity, infections, psycho-emotional stress).

For a more accurate characterization of anginal pain, we used the following diagnostic criteria: the characteristics of the pain syndrome, the connection of an attack with physical activity, the frequency and time of occurrence of pain attacks and the duration of the pain attack, the nature of the pain, from which anginal pain disappears.

When studying the intensity of anginal pain in patients with coronary artery disease, a 10-point Wong-Biker grimace scale was used [8, 12]: in the absence of pain, the scale is 0 points; with minimal pain 1-3 points; with moderate pain from 4 to 6 points; with severe pain, the scale is 7-9 points and 10 points is noted with maximum pain.

Upon admission, all patients underwent an ECG study, using the Fukuda machine, where pathological criteria were identified such as ST segment elevation or depression, T wave changes, the presence of pathological Q waves, R wave regression in V1-V4 leads, rhythm disturbances, the appearance of a new complete blockade left bundle branch also indicated instability of angina pectoris.

The leading complaint in patients with coronary artery disease is chest pain. For a more detailed characterization of anginal pain, the following criteria were used: the characteristics of the pain syndrome, the intensity of the pain attack, the frequency of pain attacks, the duration of the pain attack, exercise tolerance, the effect of nitroglycerin.

Statistical processing of the results was carried out using statistical software packages Arlequin 2006 (version 3.5.2.2.), Excel 2017, SISA. Data storage and primary processing were carried out in the Microsoft Excel 2010 database using the Statistica 10 program.

Research results:

When studying the frequency of occurrence of pain attacks during the day in the studied groups, the following data were revealed. Attacks of angina pectoris 3-5 times a day were observed in the 1st group in 17 (13.5%) patients, in the 2nd group in 7 (6.7%), ($p<0.0001$). Angina attacks 6-8 times a day were observed in 85 (67.5%) patients of the 1st group, in 82 (78.8%) patients in the 2nd group ($p=0.001$). Attacks more than 9 times a day were observed in 24 (19%) patients of the 1st group, in 15 (14.4%) patients of the 2nd group ($p>0.05$), (Fig. 1).

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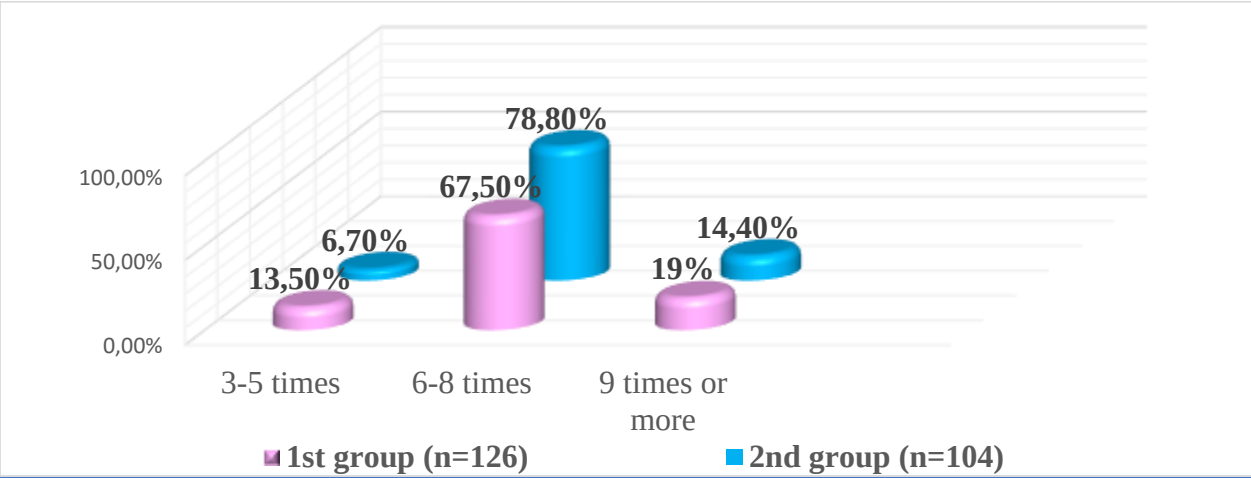
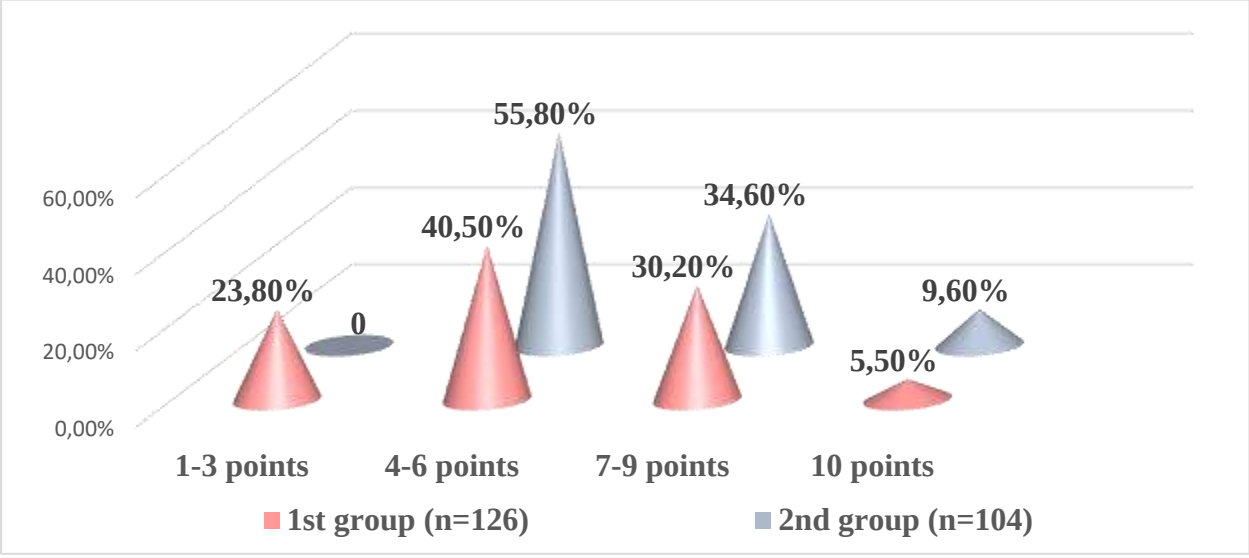


Rice. 1. Distribution of patients depending on the frequency of occurrence of anginal attacks during the day

When questioning all patients with coronary artery disease, attention was paid to the main complaint of pain behind the sternum. The intensity of anginal pain in patients with coronary artery disease was assessed using a 10-point Wong-Biker grimace scale. The frequency of occurrence and intensity of pain in patients with coronary artery disease are presented in Fig. 2. In patients with newly developed angina, the pain syndrome was 1-3 points, and it was observed only in 30 (23.8%) patients in the 1st group. In patients with progressive angina, the pain syndrome was 4-6 points and in the 1st group it was determined in 51 (40.5%), and in the 2nd group in 58 (55.8%) patients, (p<0, 05). In patients with acute coronary syndrome (ACS), the pain syndrome was 7-9 points and was observed in 38 (30.2%) patients in the 1st group and in 36 (34.6%) patients in the 2nd group, (p =0.34). Pain syndrome with an intensity of 10 points was observed in patients with acute myocardial infarction (AMI) and this was noted in the 1st group in 7 (5.5%) patients, in the 2nd group in 10 (9.6%) patients, (p=0.11).



Rice. 2. Distribution of patients according to pain intensity in points

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According to the localization of ischemic changes on the ECG, the following data were revealed. Ischemic changes in the anterior wall were noted in the 1st group in 17 (13.5%) patients, in the 2nd group in 14 (13.5%) patients (p=0.99). Ischemia of the posterior wall of the left ventricle was observed in 28 (22%) patients of the 1st group, in the 2nd group it was detected in 19 (18.3%) patients (p=0.45). Ischemic changes in the anterior septal wall were 2 times higher in patients of the 2nd group and were observed in 8 (7.7%) patients, in the 1st group in 4 (3.2%) patients, respectively (p-0.14). Lateral wall ischemia was detected in group 1 in 3 (2.4%) patients, in group 2 in 2 (1.9%) patients (p=0.81). Ischemia of two or more walls was observed in the 1st group in 52 (41.3%) patients, in the 2nd group in 42 (40.4%) patients (p=0.79) (Fig. 3).

Despite the different causes and the peculiar course of coronary artery disease, the development of myocardial ischemia is always individual, the features of its course are determined by many risk factors. When medical care is provided in a timely manner in full, the prognosis in patients with coronary artery disease at a young age is much better than in older patients.

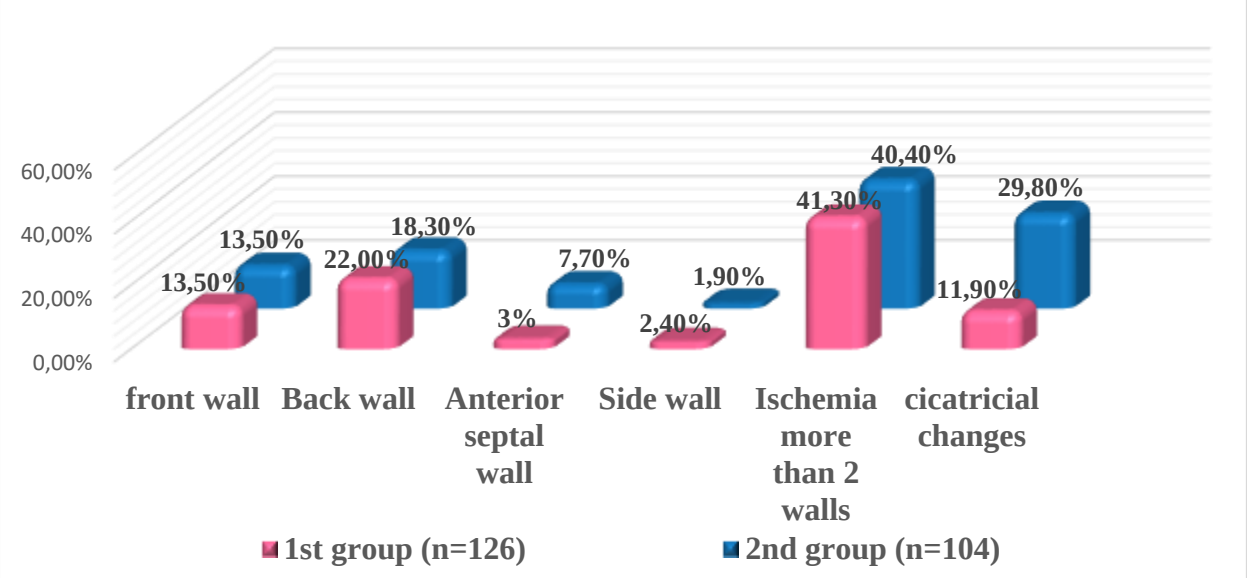

Рис. 3. Распределение больных в зависимости от ишемического поражения миокарда левого желудочка

Conclusion. Thus, the results of the study showed that patients with newly emerged and progressive exertional angina had low scores compared with AMI patients at a young and old age. The most frequent occurrence of anginal attacks from 6 to 8 times during the day was observed in 85 (67.5%) patients of the 1st group, in 82 (78.8%) patients in the 2nd group, which indicated the severity of the disease. According to the ECG data, ischemic damage to more than two walls was most often observed in young people, and in elderly men, cicatricial changes were most often noted, this was associated with a previous history of AMI.

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