



PECULIARITIES OF CLINICAL MANIFESTATIONS OF CORONARY HEART DISEASE IN MEN AT A YOUNG AGE

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Article history:	Abstract:
Received: March 6 th 2022 Accepted: April 6 th 2022 Published: May 17 th 2022	This study investigated the clinical features of coronary heart disease (CHD) in men at a young age. The study included 230 patients with CHD hospitalized in the Cardiac Intensive Care, Emergency Department #1 and #2 of Samarkand Branch of Republican Scientific Center for Emergency Medical Care (SF RSC EMC) during the period 2018-2021. The patients were divided into 2 groups according to their age. The 1st main group included 126 patients of young age. The 2nd comparative group included 104 elderly patients. The results showed that the occurrence of angina attacks from 6 to 8 times during the day was observed in 85 (67.5%) patients in Group 1, 82 (78.8%) patients in Group 2, which indicated the severity of the disease.

Keywords: CHD, ECG, EchoCG, angina pain, ischaemia.

INTRODUCTION.

According to many studies, there has been a continuous upward trend in the number of young patients worldwide with coronary heart disease (CHD) and this disease is an important socioeconomic problem due to early disability and early mortality [1,5]. The incidence of CHD in men under 45 years is 1.4-1.5 times higher than in women of this age. IHD that manifests itself in men at a young age differs from older men in its clinical manifestations and its prognosis.

In clinical practice, young patients with CHD most commonly present with episodes of stable angina, unstable angina (UA), acute coronary syndrome (ACS), acute myocardial infarction (AMI) and sudden cardiac death [2,3]. Already at the age of 30 to 39 years, all forms of CHD occur, at the age of 40 to 49 years every tenth patient has symptoms of this disease, and after 50 years every fourth patient suffers from this disease [4,7]. The manifestation of CHD at a young age has its own clinical features, because young patients complain of chest pain much more rarely than older patients [6,9], moreover, the history and the characteristics of chest pain rarely suggest ischaemic myocardial damage in these men [8,15]. In the majority of younger patients, clinical manifestations lasted for several days and ischaemic signs in the myocardium

on the electrocardiogram (ECG) appeared immediately after the angina attack[2,10].

CHD is myocardial damage caused by impaired coronary circulation resulting from an imbalance between the coronary blood flow and the metabolic demands of the heart muscle[11,14]. The discomfort resulting from a lack of oxygen to the heart muscle is called angina pectoris. It is a clinical syndrome characterised by discomfort in the chest, jaw, shoulder, back or arms, which usually increases with exercise or emotional stress and disappears rapidly after rest or nitroglycerin administration[12,13].

Thus, despite the variety of causes and characteristics of the course of CHD in young adults, the process of disease development is always individual. A better understanding of the causes of CHD in young patients, depending on the etiopathogenetic, clinical parameters and degree of course of the disease, is an important problem to obtain additional information for the individual treatment and prevention of different complications.

PURPOSE OF THE STUDY: to investigate the features of clinical signs of CHD in men at a young age.

MATERIAL AND METHODS of the study: 230 patients with CHD were examined at the Samarkand branch of the Republican Scientific Center for Emergency Medical Care (SFRCEMC) from 2018 to 2021. The patients were divided into 2 groups. The

first main group consisted of 126 patients of young age. The second comparison group consisted of 104 elderly patients. The control group consisted of 110 virtually healthy volunteers (Fig. 1).

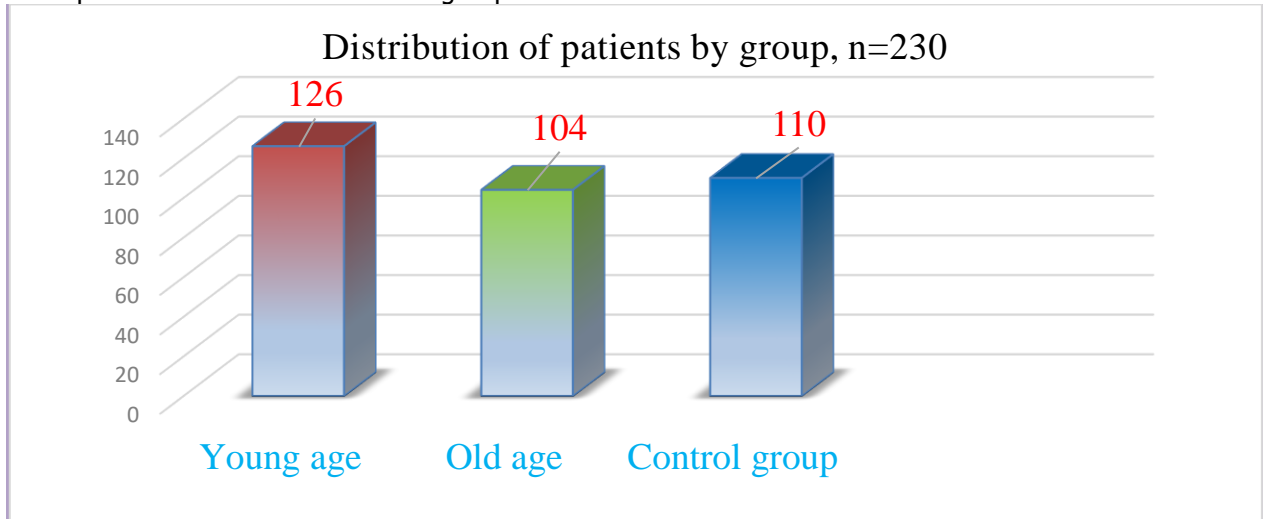


Fig.1. Distribution of patients into groups according to age

The following clinical groups are typical for the diagnosis of CHD: patients after a prolonged resting angina attack lasting more than 15 minutes, not relieved by nitroglycerin administration; patients with severe angina pectoris for the first time in the last 28-30 days; individuals with destabilization of previously stable angina pectoris with the appearance of features characteristic of at least class III of the Canadian Heart Association classification or resting pain attacks.

Clinical and medical history and 12-lead electrocardiography (ECG) were assessed in all patients. The history of CHD (previous myocardial infarction (MI), stable angina pectoris, unstable angina pectoris or unstable angina pectoris at rest) was taken in men. The patient was asked about the period prior to the development of CHD as well as the factors that triggered the development of the present disease (excessive physical exertion, infections, psycho-emotional stress).

The leading complaint in individuals with CHD is chest pain. The following criteria were used to

characterise angina pain in more detail: pain syndrome features, pain attack intensity, pain attack frequency, pain attack duration, exercise tolerance, nitroglycerin effect.

Statistical processing was performed using statistical software packages Arlequin 2006 (version 3.5.2.2.), Excel2017, SISA. Data storage and primary processing were performed in a Microsoft Excel 2010 database using Statistica 10 software..

RESULTS OF THE STUDY:

When studying the frequency of pain attacks during a day in the studied groups, the following data were revealed. Seizures of angina 3-5 times a day were in the 1st group in 17 (13,5%) patients, in the 2nd group - in 7 (6,7%), ($p < 0,0001$). 85 (67,5%) patients in the 1st group, 82 (78,8%) patients in the 2nd group, ($p = 0,001$) had angina attacks 6-8 times a day. Seizures more than 9 times a day were observed in 24 (19%) Group 1 patients, in 15 (14.4%) Group 2 patients, ($p > 0.05$), (Fig.1)

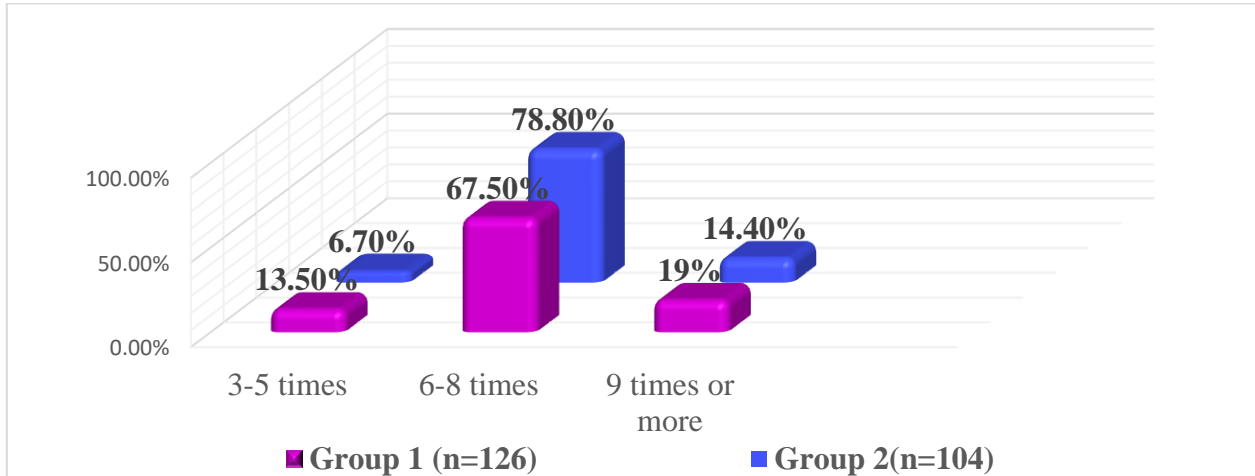


Fig. 1. Distribution of patients according to the frequency of angina attacks during a day

When all patients with CHD were questioned, attention was paid to the main complaint of pain behind the sternum. The intensity of angina pain in patients with CHD was assessed by 10-point Wong-Byker grimace scale. Frequency and intensity of pain in patients with CHD are presented in Fig. 2. In patients with first-onset angina the pain syndrome was 1-3 points, and it was noted only in 30 (23,8%) patients in Group 1. In patients with progressive angina pectoris 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, ($p < 0,05$). Pain syndrome in ACS patients was 7-9 points and was detected 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 intensity of 10 was observed in patients with AMI and it was in the 1st group in 7 (5,5%) patients, in the 2nd group in 10 (9,6%) patients, ($p = 0,11$)

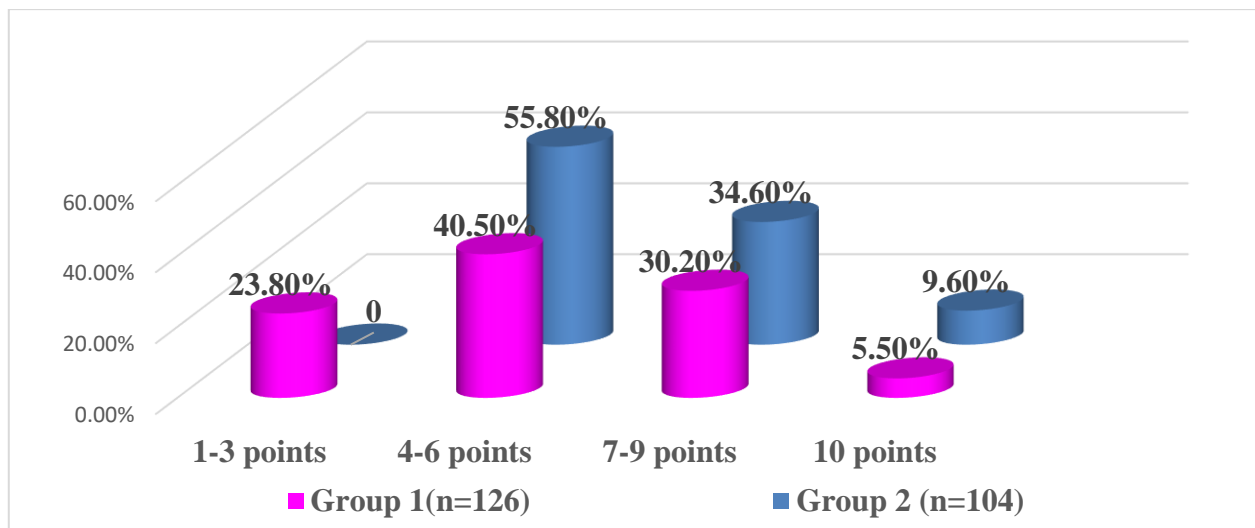


Fig. 2. Distribution of patients according to pain intensity in points

According to the localization of ischemic changes on ECG the following data were revealed. Ischemic changes of anterior wall were in the 1st group in 17 (13,5%) patients, in the 2nd group in 14 (13,5%) patients, ($p = 0,99$). Left ventricular posterior wall ischemia was observed in 28 (22%) patients in group

1, in group 2 it was revealed in 19 (18,3%) patients ($p = 0,45$). Anterior septal wall ischemic changes were 2 times higher in group 2 patients and were noted in 8 (7,7%) patients, in group 1 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 group 1 in 52 (41.3%) patients,

in group 2 in 42 (40.4%) patients, ($p=0.79$) (Fig.3)

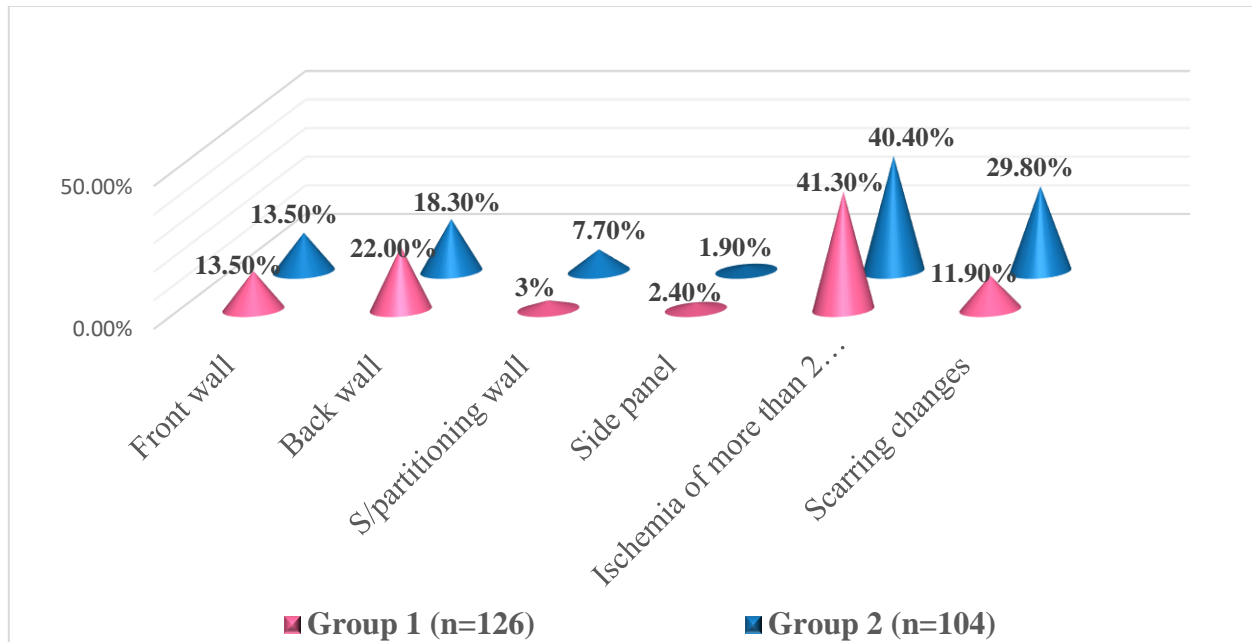


Fig. 3. Distribution of patients depending on ischemic myocardial damage of the left ventricle

Despite different causes and unique course of CHD, myocardial ischemia development is always individual and its peculiarities are determined by many FR. If medical care is provided in time and in full extent, the prognosis in patients with CHD at young age is considerably better than in elderly patients.

CONCLUSION.

Thus, the results of the study showed that patients with first-onset and progressive angina pectoris had low scores in comparison with AMI patients of young and old age. The most frequent occurrence of angina attacks from 6 to 8 times per day was observed in 85 (67,5%) group 1 patients, and in 82 (78,8%) group 2 patients, that testified to the severity of the disease. According to ECG data, coronary lesions of more than two walls were more frequently observed in young patients, and in elderly men the scar changes were more frequently revealed, it was connected with previously suffered AMI in anamnesis.

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