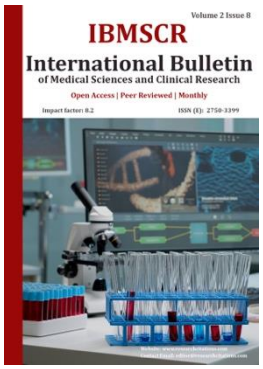

FEATURES OF MYOCARDIAL INFARCTION IN YOUNG WOMEN

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Annotation

It has been shown that the course of myocardial infarction in women, especially after 40 years, is characterized by the ¬severity of complications, such as cardiac rupture, cardiogenic shock, asystole, recurrent ventricular fibrillation and EMD, which provide a large percentage of deaths. The mortality rate of women is especially high in the fifth decade of life, and at the age of 50 to 59 years, the highest incidence of repeated large-focal necrosis was noted, while small-focal myocardial infarctions, including repeated ones, were detected in patients aged 45 to 55 years, which is more common than in women under 60 years of age.

Key words: myocardial infarction, complications, women, cardiogenic shock

According to epidemiological studies, ¬the incidence of myocardial infarction (MI) in Uzbekistan continues to increase among both men and women [1,4,5]. In this case, a ¬certain age-related dynamics of MI frequency is revealed. Thus, in the age group of 30-34 years, the incidence ¬was 0.08 people per 1000 population ¬, in those aged 35-39 years - 0.76; at 40-49 years old - 2.13; at 50-59 years old it is 5.81 and at 60-69 years old it is 17.1 [2, 3].

Gender is a very significant factor in the occurrence ¬and course of MI. Men get sick much more often than women, especially in young and middle age: in the period from 40 to 49 years - five times more often, in 50-64 years - 2-2.5 times, and after 65 years these differences are erased over due to the increased frequency of acute myocardial infarction among women in whom the disease is severe in old age and is accompanied by frequent complications and high mortality [6]. According to American authors, the average age of onset of MI in men is 67.1±10.7 years, and in women - 72.1±10.6 years [9]. Although there are other data indicating a younger age of development of MI in women - 65±2.8 years [8]; According to these authors, mortality in the first 35 days in women is higher than that in men and amounts to 14.8% and 9.1%, respectively. Women are more likely than men to experience recurrent MI (37% versus ¬27 %); especially in the first year after ¬an MI and during this time 39% of women and 31% of men die [7].

The relevance of the problem determined the purpose of ¬the study, which was to study the characteristics of the clinical course of MI in women of different ages.

We examined 112 women aged 32 to 97 years with acute MI who were admitted on the first to third days from the onset of the disease. Among them, 79 patients (24%) were younger than 60, and 33 (76%) were older than 60 years. This division is due to ¬large differences in the pathogenesis and characteristics of the course of acute myocardial infarction (AMI) in women in the ¬dynamics of involution of reproductive function.

When analyzing the ECG recorded over time, primary MI, according to WHO criteria, was diagnosed in 72 (72.9%) patients under 60 years of age and in 91 (61.1%) in the older age group (Table 1). Repeated MI was detected in a smaller percentage of cases: in 27 (27.1%) patients younger ¬and in 12 (38.9%) patients older than 60 years. Primary transmural MI was almost 2.5 times less likely ¬to be found in patients of the older age group (14.6% versus 39.2% in women under 60 years of age; $p < 0.01$), while primary macrofocal necrosis of the heart muscle was found in 1. 5 times more often detected in patients over 60 years of age (27.1% versus 18.3%; $p<0.05$). MI without a Q wave (small-focal ¬), both primary and recurrent, occurred with almost the same frequency in patients of both age groups.

The frequency of occurrence of MI by depth of lesion ¬in women over decades is presented in Table. 1.

Table 1

Complications of the acute period of myocardial infarction in women of different ages

Complications	Up to 50 years	Over 60 years old
Acute left ventricular failure (Killip II, III)	11(11.1%)	48 (15.3%)*
Cardiogenic shock (Killip IV)	2 (2.3%)	17 (5.4%)***
Recurrent ventricular fibrillation	2(1.9%)	14 (4.5%)**
Paroxysmal ventricular tachycardia	-	6 (1.9%)
Ventricular extrasystole	25(25.6%)	55 (17.4%)
Supraventricular extrasystole	6 (5.9%)	44(14.1%)***
Paroxysmal atrial fibrillation	2 (1.9%)	42 (13.2%)***
Paroxysms of atrial flutter	-	5 (1.5%)
Paroxysmal supraventricular	1 (1.1%)	-

tachycardia		
Incomplete atrioventricular block art.	1 (1.1%)	14 (4.6%)**
Complete transverse block	-	4 (2.3%)
Bundle branch block	6 (6.0%)	17 (5.4%)
Parietal pericarditis	1 (1.1%)	3 (1%)
Acute cerebrovascular accident	-	3 (1%)
Early post-infarction angina	13(12. 3%)	63 (20.3%)**
Cardiac tamponade Rupture of the interventricular septum	-	11 (3.5%) 1 (0.5%)
Chronic heart failure	8 (8.1%)	83 (26.6%)***
Dressler syndrome	3 (3.1%) **	2 (0.7%)
Heart aneurysms	6 (5.9%)	34(11.4%)**
Asystole	-	3 (1%)
Recurrent myocardial infarction	2 (2.0%)	12 (3.8%)*
Pulmonary embolism	1 (1.1%)	3 (1%)
Electromechanical dissociation	-	5 (1.6%)

When studying the stationary stage of the course of MI in women in two age groups: under 60 and after 60 years, it turned out that in the older age group, in the acute and subacute periods of this disease, complications occurred (Table 3), which then led to death and practically never occurred in women under 60 years of age. This primarily concerns heart ruptures, both external (cardiac tamponade confirmed at autopsy in 3.5% of cases) and internal (rupture of the interventricular septum, which occurred in one woman - 0.5%), as well as cardiogenic shock, which occurred 17 women (5.4%) were in the older age group and only two (2.3%) were under 60 years of age. Hypovolemic cardiogenic shock, which developed in 15 (4.8%) women over 60 years of age against the background of transmural myocardial infarction, was the cause of death , while in two patients under 60 years of age

there was only a clinical manifestation of true cardiogenic shock, successfully resolved against the background of thrombolysis and intravenous infusions of the sympathomimetic amine, dopamine.

table 2

The main causes of death in women of different ages with myocardial infarction

Causes of death	Up to 50 years	Over 60 years old
Cardiogenic shock	-	15 (25.8%)
Cardiac tamponade	-	11 (19.1%)
Acute left ventricular failure	3 (5.1%)	8 (13.8%)*
Electromechanical dissociation	-	5 (8.8%)
Recurrent ventricular fibrillation	1 (1.7%)	4 (6.9%)**
Chronic heart failure	-	4 (6.9%)
Asystole	-	3 (5.1%)
Brain edema	-	3 (5.1%)
Interventricular septal rupture	-	1 (1.7%)
Total	4 (7%)	54 (93%)**

Note. Significance of differences between groups : *- p<0.01; **- p <0.001

Among the complications that led to the death of three patients in the older age group were asystole (in one percent of cases) and electromechanical dissociation (EMD), recorded in five women (1.6%) of this age. Both cardiac tamponade and asystole occurred in the acute period of infarction (5-6 days from the onset of the disease) during the period of greatest ventricular myomalacia against the background of extensive transmural MI of the anterolateral wall of the left ventricle, including in eight of them the infarction was repeated.

As for acute left ventricular failure (ALF), fulminant alveolar pulmonary edema, refractory to drug therapy, claimed the lives of eight more patients (2.6%) over 60 years of age and three women (1%) under 60 years of age .

Also noteworthy is the development of chronic congestive heart failure in the subacute period of myocardial infarction, which is more common in women of the older age group (26.6% versus 8.1% in patients under 60 years of age; p <0.001), usually in patients with repeated MI (36 patients, or 11.5%) versus five women under 60 years of age (5.4%; p <0.01), as well as with primary ones with a recurrent course and circular noncrosis of the heart muscle - 12 (3.8%) versus 2 (2%), and at the inpatient stage, four women (8.6%) over 60 years of age died from the progression of cardiac decompensation, while no deaths from this complication were found in young and middle-aged women.

As for cardiac arrhythmias, it should be noted among these that recurrent ventricular fibrillation occurs twice as often in patients of the older age group (4.5% versus 1.9% in women under 60 years of age; p <0.01), which was also the cause of death in four older women and only one middle-aged patient. Significantly more often in the acute period of MI in

women of the older age group, paroxysmal atrial fibrillation was noted (in 42 patients; 13.2%) compared to two women (1.9%; p <0.001) of young and middle age (Table 1) .

Also noteworthy are disturbances in the conduction of impulses in the atrioventricular junction (from incomplete atrioventricular block to complete transverse block), determined mainly in patients over 60 years of age against the background of myocardial infarction, predominantly of the lower wall of the left ventricle (in 18 patients; 6.9%), while in middle age complete atrioventricular block was detected in only one patient (1.1%; p <0.01). And finally, it should be noted that early post-infarction angina (EPIS) was also more often found in patients of the older age group (63 women; 20.3%) versus 13 patients (12.3%; p <0.01) the bed is 60 years old.

Analyzing the results obtained, it is necessary to summarize that the course of myocardial infarction in older women is distinguished by the severity of the complications of this disease, which provide a significantly higher percentage of deaths (out of 58 women who died, 54 were in the older age group; 93%; p <0.001). The explanation for this fact is that by the time - AMI developed in patients over 60 years of age, the myocardium turned out to be less "competent" compared to the heart muscle in patients under 60 years of age due to the presence of pronounced diffuse (over many years) the development of MI was preceded by stable angina pectoris), cardiosclerosis and especially post-infarction cardiosclerosis as a result of previous myocardial infarctions (Table 2). Thus, in women over 60 years of age, MI was repeated in 38.9% of cases versus 27.1% in patients under 60 years of age.

The mortality rate was especially high for women aged 70 to 79 years (Table 2); in the same decade, the highest incidence of MI was discovered (38.7% of all MI), and noteworthy is the highest percentage in this decade of life of the incidence of repeated transmural MI, reaching 51.5% (p <0.001), as well as for secondary and primary large-focal MI, detected in 48.7% and 46.2% of cases, respectively.

Also, one cannot but attract attention to the high frequency of primary and repeated small-focal MI (33.1% and 36.3%, respectively), and it should be noted that small-focal necrosis, including repeated (second, third, fourth, etc.) .d.), are detected in patients aged 80 to 89 years (in 14.3% of cases), which is two times less common than in women aged 60 to 69 years (in 31.2% of cases) and 70-79 years old (36.3% of cases), but more often than in women under 60 years old (10.4% aged 50 to 59 years).

Conclusions. The course of MI in women, especially after 60 years of age, is characterized by the severity of complications, such as cardiac rupture, cardiogenic shock, asystole and EMD, which provide a large percentage of deaths.

The mortality rate is especially high in women aged 70 to 79 years, and in this decade of life the highest incidence of repeated transmural and large-focal MI is noted, while small-focal necrosis, including repeated ones, was detected in patients aged 80 to 89 years , which is two times less common than in women from 60 to 69 years old and from 70 to 79 years old, but more often than in women under 60 years old.

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