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RISK FACTORS FOR ACUTE MYOCARDIAL INFARCTION IN YOUNG AND MIDDLE-AGED PATIENTS

[1]*U. R. Turaev and [2]L. V. Kadirova

[1]Doctor of Medical Sciences (PhD), Associate Professor of the Department "Pathological Physiology", Bukhara State Medical Institute, Uzbekistan.

[2]Assistant of the Department "Pathological Physiology" Bukhara State Medical Institute, Uzbekistan.

***Corresponding Author: U. R. Turaev**
Doctor of Medical Sciences (PhD), Associate Professor of the Department "Pathological Physiology", Bukhara State Medical Institute, Uzbekistan.

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SUMMARY

We investigated 300 patients with primary and repeat MI, among them 197 have been complicated by myocardial infarction, including 142 patients with - myocardial infarction with tooth Q. Patients were divided into two age groups: young (under 45 years) - 70 people and middle-aged (46 to 60 years) - 230. All patients were treated between 2006 and 2012 in Bukhara branch and regional RSCEMH Heart Hospital.

KEYWORDS: Heart failure, smoking, obesity, overweight.

INTRODUCTION

The results of these studies indicate that the major risk factors for coronary heart disease are (male sex, lipid disorders, hypertension, physical inactivity, smoking, chronic foci of infections, excessive body weight) are found in the majority of patients with myocardial infarction before the age of 60 years. The most important for the prevention of the disease and its complications in both groups of patients were corrected lipid metabolism disorders, smoking cessation, rehabilitation centers of infections, the normalization of physical activity.

One of the major medical and social problems is the increasing mortality rate from cardiovascular diseases, among which the most significant share is acute myocardial infarction (MI) with a tendency to increase its frequency in young and middle-aged patients.[1,3,5,7] Over the past 15 years, the overall mortality rate of young patients with coronary heart disease (CHD) has reached 30% even when using modern treatment methods.[2,4,6] Therefore, it is relevant to study the significance of modern risk factors and their combinations in patients with IHD and developed IT in young and middle age in order to find possible directions for primary and secondary prevention of myocardial infarction.

The purpose of this study was to evaluate the most significant set of risk factors in IM.

RESEARCH MATERIALS AND METHODS

The study included 300 patients with primary and repeated MI, among them 197 had complicated myocardial infarction, including 142 patients with myocardial infarction with a q wave. the Patients were divided by age into two groups: young (up to 45 years) - 70 people and middle-aged (46 to 60 years) - 230 people. The average age in the first group of patients was 41.3±0.6 years, in the second - 53.1±0.3. All patients were treated from 2006 to 2012 at the Bukhara branch of the rscemp and the regional cardiology hospital. Along with a thorough clinical and laboratory examination, when working with patients, we analyzed many likely risk factors that could be predisposing to the development of MI or provoking ITS occurrence.

RESEARCH RESULTS

It turned out that in both age groups of patients with myocardial infarction, the most common risk factors were various degrees of lipid metabolism disorders (64%), lack of exercise (85%), Smoking (82%), addiction to fatty foods (91%), increased consumption of table salt (85%), and alcohol abuse (37%). No less common were foci of chronic infections (72%), hypertension (70%), overweight (52%) and obesity (43%). Also, non-correctable risk factors were detected with high frequency - male gender (95%) and hereditary burden of cardiovascular diseases (82%). 56% of patients had a history of hypertensive crises, 56% had heart pain, 30% had signs of heart failure, 15% had extrasystole, and 11% had paroxysms of atrial fibrillation. 43% of patients had already suffered a myocardial infarction at the time of the study. However, the majority of patients (58%) were not treated or were treated sporadically before their DEVELOPMENT. Chronic bronchitis (23%), urolithiasis (14%), cholelithiasis (9%), thyroid diseases (3%), gout (2%), and bronchial asthma (1%) are often diagnosed as co morbidities. Diabetes mellitus (22%)

and metabolic syndrome (16%) were observed with the same frequency in both study groups.

In middle-aged patients, hypertension, heart failure, and a history of myocardial infarction, seasonal exacerbations, and atrial fibrillation paroxysms were more common than in young patients ($p<0.05$). In turn, Smoking, obesity, alcohol abuse, and occupational hazards prevailed in patients under the age of 45 ($p<0.05$).

When IM was complicated, middle-aged patients were more likely to have an addiction to fatty foods, lack of exercise, Smoking, foci of infections, lipid metabolism disorders, obesity, alcohol abuse, previous myocardial infarction and heart rhythm disorders in the history ($p<0.05$), less often - hypertension, hereditary burden of IHD ($p<0.05$).

In young patients with complicated MI, hereditary burden of IHD, Smoking, history of extrasystole, and Association of the onset of myocardial infarction with acute respiratory infection were more significant ($p<0.05$). In addition, Smoking, foci of infection, dyslipidemia, overweight, and colds were more common in these patients than in the group of patients with complicated middle-aged myocardial infarction ($p<0.05$).

The disease manifested itself in 56% of patients under the age of 45 years and 41% of patients 46-60 years, with angina it began in 43 and 56% of patients, with heart rhythm disorders-in 1 and 3% of patients, respectively. At the same time, the majority of both young patients (82%) and middle-aged patients (58%) were not treated or treated incorrectly before they started. Chest pain before the development of the disease, for which no help was sought, was noted by 38% of young patients and 50% of middle - aged patients. At the same time, 1 and 19% of patients, respectively, had these symptoms repeatedly.

In this study, the most frequent provoking factor for the development of MI (61% - in young patients and 54% - in middle-aged patients) was recognized as nervous and emotional stress. The onset of the disease was associated with physical overload in 16 and 11% of patients, respectively, with sharp fluctuations in Helium and weather factors-10 and 7%, and with a hypertensive crisis-13 and 16%.

To assess the significance of the most frequent risk factors, the study of their influence on the clinical course of the disease in the examined patients was conducted.

In a comparative study of MI in patients with excess and normal body weight, it was found that IT was significantly more often detected in young patients (table. 1). At the same time, the majority of patients of all age groups had a duration of this condition of more than five years.

Table 1: Distribution of MI patients by age and degree of obesity, abs. number (%).

Degree of obesity	Up to 45 years	46-60 years	Total
Moderate	21 (30)	59 (26)	80 (26,7)
Average	19 (27)	40 (17)	59 (19,7)
Expressed	4 (6)	8 (3)	12 (4)
Total	44 (63)	107 (46)	151 (50,3)

Overweight patients had higher concentrations of glucose and total cholesterol in the blood serum, heart rate, blood PRESSURE and hypertension, and were more likely to have urolithiasis, diabetes mellitus, and gout (table. 2). With an increase in body weight, the proportion of angina-asthmatic forms of the disease increased in the structure of variants of the course of MI, and emotional and mental disorders were more often detected. In the acute period of MI in patients with excess body weight, the severity of heart failure and the severity of the condition, the frequency of detection of atrial fibrillation and pneumonia were significantly lower than in patients with normal body weight. However, by the end of the third week of the disease in these patients, the manifestations of heart failure increased.

It is worth noting that only 17% of the studied patients did not smoke, while 76% of patients in each group smoked for more than 10 years, and 57% of young and 62% of middle-aged patients had a Smoking experience of more than 20 years.

Table 2: Risk factors and concomitant diseases in patients with MI, abs. number (%), p-confidence criterion.

Risk factor	Without excess body weight, n=129	With overweight, n=171
Increased consumption of fatty foods	112 (87,0)	163 (95,0)
	p<0,05	
Hypodynamia	98 (76,0) 158 (92,0)	
	p<0,05	
Alcohol abuse	38 (29,0) 86 (56,0)	
	p<0,05	
Arterial hypertension	77 (60,0)	117 (68,0)
Increased salt intake	102 (79,0)	151 (88,0)
	p<0,05	
Diabetes	17 (13,0) 47 (27,0)	
	p<0,05	
Increased consumption of sweets	27 (21,0) 60 (35,0)	
	p<0,05	
Gallstone disease	10 (8,0)	11 (6,0)
Urolithiasis	12 (9,0)	28 (16,0)
Gout	1 (1,0)	4 (2,0)

The study of MI in patients with hypertension revealed the following features. Hypertension was more common in middle-aged patients. In most patients with hypertension, its duration before the development of MI was from 7 to 15 years. When the duration of hypertension was less than 15 years, uncomplicated myocardial infarction developed more often, and complicated infarction occurred more than 15 years ($p<0.05$). In patients with hypertension, the features of the clinical picture of the disease were associated with vascular lesions (most often they were preceded by angina, some patients had a stroke and heart attack, more patients with hypertension showed signs of chronic cerebral circulatory insufficiency, retinal angiopathy, diabetes mellitus, urine and gallstones, and signs of heart failure). Among the clinical variants of MI in patients with hypertension, in contrast to patients with normal blood pressure, the cerebrovascular type of the disease was detected. The Association of hypertension with it the tendency to increase complications and their combinations increased its share of complications group contractile failure.[8] Among the complications, patients with hypertension were more likely to have emotional disorders, less often pericarditis and embolisms than those with normal blood pressure. In addition, the regression analysis revealed a significant value of the parameters of hypertension in the development of rhythm disorders and cardiogenic shock as complications of the acute period of MI.

DISCUSSION

The results of these studies suggest that the main risk factors for IHD (male gender, lipid metabolism disorders, hypertension, lack of exercise, Smoking, chronic foci of infections, overweight) are found in most patients with IHD under the age of 60 years. It is noteworthy that the duration of exposure to the most important of them (Smoking, overweight, and hypertension) in most patients was more than five years. This gives grounds for carrying out adequate preventive measures.[6,7]

Most important to preventing the disease and its complications in both groups of patients was correction of violations of lipid metabolism, anti-Smoking, sanitation foci of infection, normalization of physical activity. For middle-aged patients, first of all, treatment of hypertension and manifestations of heart failure is necessary; for young patients, it is necessary to fight bad habits, correct body weight, and normalize working conditions.

Thus, it is advisable to improve medical examination aimed at identifying risk groups and timely implementation of rehabilitation programs. In people at risk for cardiovascular diseases, it is mandatory to perform an electrocardiogram and monitor blood pressure at an earlier date, as well as regular examination of the levels of lipids and glucose in the blood serum.

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