PREVENTION OF MYOCARDIAL INFARCTION WITH MODERN DIAGNOSIS AND DEVELOPMENT

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Annotation

This article provides detailed information about myocardial infarction, its causes, clinical signs, and treatment methods. Myocardial infarction commonly occurs in individuals suffering from chronic heart diseases and the accumulation of cholesterol in blood vessels over the years. The article discusses early diagnosis, therapeutic measures, and prevention strategies for myocardial infarction. It is beneficial for cardiologists, medical professionals, and individuals concerned about their health.

Keywords: myocardial infarction, prevention, mortality, heart, cardiologist, pathogenesis, chronic, ischemic, necrosis, prophylaxis

Nowadays, myocardial infarction, like various diseases, is becoming more common among people. In this regard, before getting rid of this disease, it is important to understand its causes and form a system of protection against it. Myocardial infarction is an acute condition, a clinical form of ischemic heart disease, caused by necrosis (death) of the heart muscle tissue (myocardium) as a result of complete or partial lack of blood supply. This leads to a disruption of the functioning of the entire cardiovascular system and threatens the patient's life. The main and most common cause of myocardial infarction is a violation of blood flow in the coronary arteries, which supply the heart muscle with blood and, accordingly, oxygen. Active prevention and early diagnosis, due to various subjective and objective reasons, lead to the preservation and even aggravation of the unpleasant trends associated with myocardial infarction. In developed countries, 20% of patients with myocardial infarction die before receiving medical care (in most cases from arrhythmia), and the 30-day mortality rate reaches 25%. This disease affects people aged 45-60. Men suffer from myocardial infarction more often than women, and men aged 40-50 are five times more likely to suffer from it. In recent years, the incidence of myocardial infarction has been increasing. Myocardial infarction is especially common among people aged 45-60 . Men suffer from myocardial infarction more often than women. Men aged 40-50 are five times more likely to suffer from it. Women develop the disease on average 10-15 years later than men. There are also many young people under the age of 40 who have had myocardial infarction. Myocardial infarction is more common in people with atherosclerosis, hypertension, and diabetes. The reason why men are more likely to suffer from these diseases is that men's daily diet is high and they are under a lot of stress.

Myocardial infarction occurs in 97-98% of patients with coronary artery atherosclerosis. Coronary artery occlusion is caused by atherosclerotic plaques, bleeding into them, and impaired blood clotting. If acute coronary artery stenosis persists for a long time, myocardial infarction occurs. The devascularized myocardial infarction areas stimulate sympathetic nerve

fibers. The development of myocardial infarction is caused by rupture of the atherosclerotic plaque capsule. The rupture of the atherosclerotic plaque capsule is caused by the relative size of the plaque core and its "softness" (more lipids and liquid cholesterol outside the cell, less collagen), the thinness of the plaque capsule and the low content of collagen in it, and the development of inflammation with the participation of macrophages. After the plaque ruptures, the substances inside it mix with the blood, platelet aggregation develops. Factors of the blood coagulation system are activated. Fibrin and erythrocytes aggregate to form a solid thrombus. Coronary artery occlusion disrupts the blood supply to the myocardium. Myocardial necrosis develops, most often in the left ventricular wall. Due to necrosis in the myocardium, systolic and diastolic function of the heart is impaired. The 2018 European Society of Cardiology/American College of Cardiology Foundation/American Heart Association/World Health Federation Universal definition of myocardial infarction for ECG diagnosis of ST segment elevation type of acute myocardial infarction requires ST elevation at the J point of at least 1 mm. (0.1 mV) in two adjacent leads with intersection points: ≥1 mm in all leads except V2-V3. For V2-V3 leads: ≥2 mm in men ≥40 years of age, ≥2.5 mm in men younger than 40 years of age, or ≥1.5 mm in women regardless of age. This assumes a standard calibration of 1 mV/10 mm. These elevations must be in anatomically adjacent leads. (I, aVL, V5, V6 correspond to the lateral wall; V3-V4 correspond to the anterior wall. ; V1-V2 correspond to the septal wall; II, III, aVF correspond to the inferior wall.) This criterion is problematic, but acute myocardial infarction is not the most common cause of ST-segment elevation in patients with chest pain. More than 90% of healthy men have at least 1 mm (0.1 mV) of ST-segment elevation in at least one precordial lead. Therefore, the clinician should be familiar with the so-called ECG mimics of acute myocardial infarction, including left ventricular hypertrophy, left bundle branch block, accelerated rhythm, early repolarization, pericarditis, hyperkalemia, and ventricular aneurysm.

The patient's condition before the onset of myocardial infarction is as follows. The patient began to feel frequent pain in front of the heart. Pain attacks occur not only during exertion, but also at rest. Shortness of breath, irregular heartbeat, weakness are added. Pain in the left arm can sometimes pass from one side to the other, numbness in the jaw area, severe pain behind the sternum, cold sweat.

Myocardial infarction begins with severe pain in the heart area. Scientists who have studied this symptom, AL Sirkin (1991) showed that myocardial infarction begins with pain in 94% of patients, FI Komarov and others - in 86-95% of patients. The pain is severe. The patient often cannot stand it. Sometimes there are patients who endure the pain and take medication on their own. The pain is described in different ways. Some say that "a hot iron is pressing on my chest," while others say that "a horse's hooves are standing in my chest." The pain is long - lasts from several hours to one or two days.

The average acute period of myocardial infarction lasts from one week to 30 days. The patient's condition begins to improve, the patient feels that the dangerous days have passed, his activity in bed increases. Post-infarction angina attacks may occur. Blood pressure remains normal. The patient's condition improves, he walks actively, occasionally feels pain around the heart, blood pressure and pulse are normal. Heartbeats are even, sometimes extrasystoles are observed. In general, during this period, the chronic form of ischemic heart disease proceeds in a different way. Complications rarely develop. A scar gradually forms in the place of the necrosis focus in the myocardium of the heart. The clinical picture is stable, and signs of aseptic inflammation disappear. This period lasts from 1 to 3 months. Myocardial infarction is first

observed in the wall of the left ventricle. When examining the hearts of people who died from myocardial infarction, it is determined that the coronary artery is clogged with atherosclerosis. Changes in the myocardium of the heart are observed in three areas.

When a patient is suspected of having myocardial infarction, treatment begins with immediate hospitalization to the nearest hospital and urgent complex resuscitation measures are taken. It is very important to calm the patient, relieve pain with painkillers, eliminate arrhythmia, heart failure and cardiologist. Depending on the condition, coronary angioplasty should be performed. This is an operation to expand the wall of the arterial blood vessel. Rehabilitation and its duration depend on the extent of heart damage. This is decided by the attending physician.

myocardial infarction, it is necessary to provide immediate medical care before they are taken to the hospital. Nitroglycerin is administered sublingually, aspirin 500 mg is chewed, and heparin is administered subcutaneously or clopidocrel 75 mg is given.

Drugs that slow down the heart rate are prescribed **.** Lie down, calm down, subcutaneously inject 1 ml of 2% promedol, 1-2 ml of 1% morphine, 0.5 ml of 0.1 atrapine sulfate, 1 ml of 2.4 pipolfen, 2 ml of 50% analgin in a solution of dihydro suprastin.

In conclusion, in order not to suffer from myocardial infarction, it is necessary to visit a cardiologist every 6 months and undergo an ECG examination. Currently, 729 myocardial infarctions are observed in our Shahrikhan district annually, and 691 of them are cured. To summarize, it is necessary to provide timely assistance to each patient and eat right and not strain yourself. Each person should be careful about 7 things for his own health. High cholesterol in the blood, smoking and drinking, overweight, chronic stress, diabetes, and old age, this type is more common in men. In women , obesity, lack of movement, obesity, stress , and hypodynamia can be.

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