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CARDIAC ISCHEMIA. ANGINA CLINICAL FORMS AND DIAGNOSIS

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Annotation

The causes, principles of diagnosis, prevention and treatment of coronary heart disease (CHD) and angina pectoris are outlined. The main components of nursing care for ischemic heart disease and angina pectoris are presented.

Key words: coronary heart disease, angina pectoris, diagnosis, prevention, treatment, nursing care.

Angina Angina (angina pectoris) is a clinical syndrome manifested by a feeling of discomfort or pain in the chest, the development of which is associated with transient myocardial ischemia due to a discrepancy between the myocardial oxygen demand and its delivery through the coronary arteries. This situation occurs when the lumen of the coronary arteries narrows by 50–70%.

Clinic and diagnosis The main clinical manifestations of the disease are pain in the chest, which patients characterize as pressing, squeezing, bursting, burning. They most often point to the place of pain not with one finger, but with the entire palm or fist, pressing them to the sternum or to the left of it. The pain can spread (radiate) to the neck, left shoulder, left arm, back and, less commonly, to the lower jaw, epigastric region, right half of the chest and right arm. The attack occurs at the height of physical activity (angina pectoris). The pain may be accompanied by a feeling of fear of death, anxiety, general weakness, sweating, and nausea. The duration of painful attacks usually does not exceed 15 minutes. They disappear completely after stopping physical activity or using nitroglycerin for a few minutes. The occurrence of angina attacks is provoked by physical and psycho-emotional stress, cooling, smoking, increased blood pressure, rich food, unfavorable weather conditions. Typically, angina attacks occur when the patient leaves the room to go outside in cold, windy weather. Atypical

manifestations of angina pectoris are possible: patients note a feeling of heaviness in the chest, difficulty breathing, lack of air, weakness, palpitations, pain in the epigastric region, heartburn. These equivalents of angina occur and resolve under the same conditions as chest pain. Timely diagnosis of angina pectoris is important for determining further tactics of medical care; algorithms for its diagnosis have been developed based on clinical symptoms.

Clinical forms of NS:

• new-onset angina

– attacks of pain have occurred within the last 2 months;

• progressive angina – the frequency and/or duration of anginal attacks increases, exercise tolerance decreases, attacks appear at rest, and the effectiveness of antianginal drugs decreases; with the development of NS, the patient moves up at least 1 class, according to the functional classification;

• angina at rest – attacks at rest lasting more than 20 minutes for 2 months.

NS refers to emergency conditions with a high risk of myocardial infarction and sudden death. The nurse may suspect angina if an angina attack:

• developed for the first time in life;

• occurs with less physical activity than before, and more often;

• lasts more than 20 minutes, and requires taking nitroglycerin in a larger dose than before;

• has new zones of pain irradiation. Severe weakness, cold sweat, palpitations, shortness of breath, decreased blood pressure, and a feeling of fear allow the nurse to suspect an MI. Such patients are subject to immediate hospitalization in the cardiology department. Distinctive signs of angina and MI are presented in table.

2. Mandatory laboratory tests:

• general blood analysis;

• determination of fasting blood glucose concentration;

• detailed lipid profile: total cholesterol, HDL, LDL, TG on an empty stomach;

• creatinine concentration in the blood. If there are special indications, determine:

• markers of myocardial damage (cardiac troponin

• thyroid hormones. You should carefully monitor the level of cholesterol and TG in the blood, which should not exceed 5.2 and 1.6 mmol/l, respectively. The results of instrumental studies confirm or exclude the diagnosis of the disease: • A resting ECG is indicated in all patients with chest pain; it is advisable to write it down at the moment of an attack of pain;

• ECG registration while the patient is performing physical activity (bicycle ergometer, treadmill);

• 24-hour ECG recording (Holter monitoring). As prescribed by the doctor, more complex diagnostic methods are also used - echocardiography at rest and during

physical activity, coronary angiography (contrast study of the main coronary arteries of the heart), and the indications for the latter must be strictly reasoned. An ECG, especially against the background of physical activity, helps to identify metabolic changes (ischemia) of the heart muscle, assess the severity and prognosis of coronary artery disease. If it is impossible to perform tests with physical stress due to the presence of concomitant diseases or contraindications to stress tests, transesophageal pre-Table 2 Clinical manifestations of angina and myocardial infarction Sign Angina pectoris Myocardial infarction Appearance of pain More often during physical activity More often at rest Nature of pain Weak, moderate, strong Very strong, unbearable Duration of pain From several minutes to half an hour From several hours to 2 days Irradiation of pain Typical - in the left arm, shoulder, shoulder blade Typical and atypical - in the right half of the chest, spine Use of nitroglycerin Relieves pain Does not relieve pain Pulse Normal frequency, rhythmic, full Rapid , arrhythmic (extrasystole), weak blood pressure filling Normal, sometimes increased Decreased Nausea, vomiting Occur extremely rarely Occur frequently Body temperature Normal Often increased Increased leukocyte content in the blood No ECG available No changes or with signs of myocardial ischemia Signs of MI with characteristic dynamics cardiac electrical stimulation or pharmacological “stress” tests. Holter monitoring can provide additional diagnostic information and record silent episodes of myocardial ischemia. Echocardiography allows you to assess the functional state of the valves and heart muscles, and identify changes in myocardial contractility. Coronary angiography can provide important information regarding the location and severity of lesions (stenosis) of the coronary arteries, which determine the indications for surgical treatment. According to indications, in specialized cardiological centers, two-dimensional myocardial perfusion scintigraphy with 201 Ta and single-photon emission computed tomography are performed to determine the causes of pain.

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