



ISCHEMIC HEART DISEASES. STENOCARDIA

Rahmonova Umida Tohir qizi

Shodmonqulova Diyora Bobur qizi

Mingyasharova Mehriniso Anvar qizi

Qo'yliyev Humoyun Zokir o'g'li

Students of Tashkent Medical Academy

<https://doi.org/10.5281/zenodo.10828895>

ARTICLE INFO

Received: 11th March 2024

Accepted: 17th March 2024

Online: 18th March 2024

KEYWORDS

Atherosclerosis, arterial hypertension, heart failure, angina, stenocardia, ischemia, nitroglycerin.

ABSTRACT

Coronary artery disease is an acute or chronic damage to the heart muscle, which is caused by the reduction or cessation of blood supply to the myocardium as a result of pathological currents in the coronary artery system.

Etiology: Atherosclerosis of coronary arteries (90%) Angiospasm of coronary arteries as a result of nervous emotional tension, stress. Changes in the endothelium of coronary arteries. Violation of microcirculation. Increased activity of the blood coagulation system (hypercoagulation) Risk factors: hypercholesterolemia AG smoking low mobility fat pressure.

RISK FACTORS

- It is divided into 2:
- Unchangeable factors-gender, age, generation.
- Modifiable factors are smoking, alcohol intake, obesity, inactivity, hypercholesterolemia, arterial hypertension, diabetes, etc.
- 3 factors are the main ones: Arterial hypertension, hypercholesterolemia, smoking.
- Among them is atherogenic dyslipoproteinemia, which leads to atherosclerosis.
- If low-density LP is reduced by 1%, mortality from YUIK is reduced by 2%.

Classification of 1984, which was developed based on the suggestions of WHO experts (1979):

1. Sudden coronary death.

2. Angina.

-2.1. Exertion angina.

- First onset of angina pectoris.

- Stable tension angina (FS I-IV).

- 2.2. Spontaneous angina pectoris.

3. Myocardial infarction. - Transmural (with a large hearth) - Nontransmural (with a small focus)

4. Post-infarction cardiosclerosis.



5. Heart rhythm disorder.

6. Heart failure.

Yu.I.K classification (2000 4th Congress of Cardiologists of Uzbekistan with changes).

1. Sudden coronary death (in the UK, sudden coronary death can occur during intense physical exertion (running, skiing fast, intensively participating in other sports). This diagnosis is sometimes made at the time of exertion or 30 minutes after exertion. within 6 hours (usually 1 hour) when available)

2. Angina.

2.1. stable tension angina (with FS).

2.2. unstable angina pectoris:

- First onset angina pectoris.

- progressive angina pectoris.

-Angiospastic angina pectoris.

- Angina in the morning after a heart attack.

- Postoperative morning angina pectoris.

3. Painless myocardial ischemia.

4. Myocardial infarction: -Q is toothless -Q toothed.

5. Post-infarction cardiosclerosis.

6. Violation of heart rhythm and conduction.

7. Heart failure

STENOCARDIA

- Ischemic heart disease (CHD) is a common type and is characterized by agenesia pains.
- **Stable stress angina FS I** – an attack of angina occurs during strong physical exertion.
- **Stable tension angina FS II**-an attack occurs when walking more than 500 meters with limited physical exertion, climbing above 1 floor.

- **Stable angina pectoris FS III**-pain attack occurs when walking 500 meters.

- **Stable tension angina FS IV**-At rest, an attack of angina occurs when walking up to 100 meters, talking, with limited physical activity.

- **Spontaneous (Prinsmetal) angina pectoris.** It is characterized by specific symptoms. Angina pains appear suddenly at the same time without tension, often in the evening. Pains of high intensity and duration of 10-15 minutes or more.

- **First-onset angina pectoris.** Entering the group of unstable angina, it passes to stable angina after 15-25 days in young people, and after 2 months in the elderly.

- **Atypical transient angina pectoris (myocardial ischemia)**

1. The arrhythmic equivalent of angina pectoris (the ischemia zone is located in the conduction zone). Rhythm disorders occupy the main place in the clinic.

2. Asthmatic equivalent of angina pectoris (acute left ventricular failure).

3. Peripheral equivalent of angina pectoris (absence of chest pain).

- Painless myocardial ischemia. Clinical signs are not observed. It often ends with sudden coronary death or acute myocardial infarction. This form of ischemic heart disease is characterized by acute paroxysmal pain in the area of the heart lasting from a few seconds to 20 minutes. In this case, the blood flow along the coronary vessels, that is, the vessels that



supply the myocardium with blood, is disturbed, which causes pain in the area of the heart or behind the chest.

- Pain behind the sternum begins after stress and physical exertion, disappears when resting and taking nitroglycerin.
- The EKG can show signs of ischemia in the myocardium or the appearance of these signs during physical exertion.
- The main method of diagnosis includes angiography, in which narrowing of the coronary arteries can be seen.

Causes of coronary syndrome:

- Atherosclerosis of coronary vessels;
- Coronary vasospasm;
- Coronary artery obstruction (emboli, button anomalies, arteritis, artery occlusion);
- Strongly developed hypertrophy of the myocardium; As a result of myocardial metabolism disorders: hyperthyroidism, anemia, paroxysmal tachycardia.

Angina in what cases the pain starts:

- Cold.
 - Food.
 - Excitement.
- } Reduces seizures
- Emotional stress.
 - Morning tension/stress
- } More
- Peace
 - At night
- } Vasospasm

Anamnesis:

The nature of the pain should be asked. "Pain" is often not mentioned by patients. They use the terms "burning", "squeezing", "pressing", "burning", "discomfort".

- The location and radiation of the pain should be asked. The pain is mainly in the chest area, chest area.
- Pain irradiating dermatome on the left S8-T4 (from the left shoulder, axilla area to the inner surface of the left hand to 4-5 fingers). Sometimes it spreads on the right side as well as on the projection of the left.
- In rare cases: on the jaw, between the shoulder blades, on the upper back, on the upper part of the neck. If the patient points to the place of pain with one finger, the probability of angina is very low.

Is the duration of the pain asked?:

- Pain for angina pectoris has a short attack character, passing without complete discomfort.
- An attack that begins after stress passes after 3-5 minutes of rest.
- An attack of pain that starts when angry and after eating a lot lasts for 15-20 minutes.



- If the attack lasts 30 minutes or more, it indicates unstable angina or acute myocardial infarction.

Ask - Does nitroglycerin help?:

- If nitroglycerin helps, shortens the attacks, prevents the development of the attack and the disease, and the patient can carry out even a little physical exercise, it is possible to diagnose angina without fear. Ask patients about adverse factors:

- Does the family have cardiovascular diseases?
- Do you have arterial hypertension?
- Diabetes.
- Obesity.
- Smoking.
- Alcohol abuse.
- Absence of negative factors cannot be a reason to rule out angina pectoris

View:

- At the onset of the disease, SAB and DAB are often elevated, but sometimes hypotension may also be present.
- During an attack, pain, rhythm gallop, systolic noise is heard in the chest.
- Disturbance of the rhythm can be considered as a result of ischemia or as a negative factor that provokes an attack of angina pectoris.
- Symptoms of diabetes (retinopathy, neuropathy,).
- Symptoms of atherosclerosis (xanthelasma).
- Symptoms of thyrotoxicosis, myxedema Of course, aortic stenosis, hypertrophic cardiomyopathy, prolapse of the mitral valve should be ruled out, because in these diseases the pain of angina can be similar.
- Skin coverings: pallor/ cyanosis, presence of rash (enveloping lichen planus mimics anginal-like pain).
- Neck view: bulging veins or veins. Determination of pulse, AB and temperature in wrist and femoral arteries.
- Palpation of the chest and spinal cord. Detection of local pain, fractures, diseases of the spine during palpation. Chest percussion should be performed to rule out pneumothorax.
- When looking at the leg - to rule out deep vein thrombosis of the leg (TELA), ankle swelling - heart failure. Auscultation of the heart and lungs.
- Absence of breath and voice - pneumothorax. Friction noise of pleural sheets (pericardium) - pleurisy, pericarditis. Wet crackles in the lower part of the lungs - heart failure,
- systolic noise at the peak - mitral valve prolapse,
- diastolic noise in the aorta - folding of the ascending part of the aorta,
- Abdominal palpation – pain in the epigastrium? (in diseases of the gall bladder, stomach, duodenum).

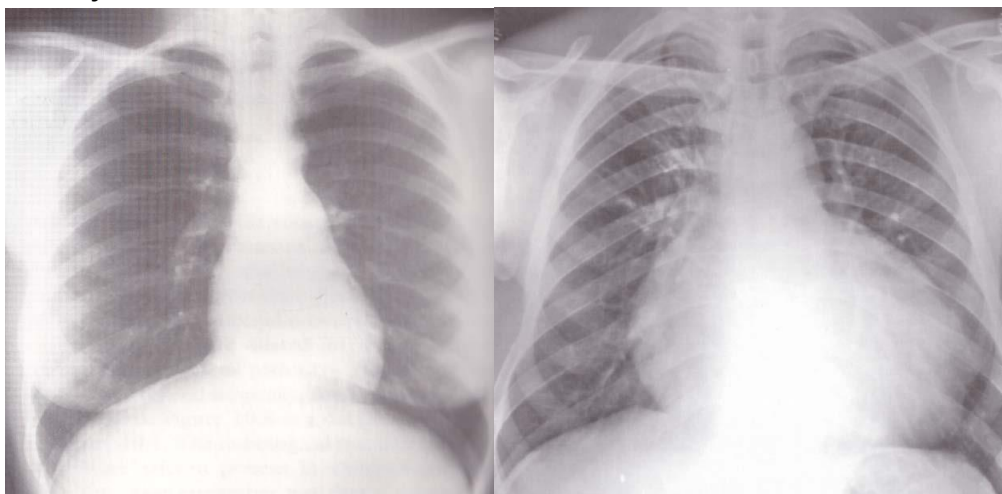
Clinic. The duration of the pain attack is 1-5 minutes, sometimes up to 10 minutes (maximum 20 minutes), the pain is of a squeezing nature located in the chest, is given to the left arm, shoulder, and under the breast area. Rauze questionnaire produced by the World Health Organization (1968) for the diagnosis of angina pectoris. Have you ever felt discomfort or pain in your chest? Does it hurt when you walk fast or climb a mountain? Pain when walking straight? What do you do when it hurts to walk? What happens after it stops? Duration of pain? Where is the pain located? The sequence in the questionnaire should not be broken. This questionnaire can be used during the medical examination of patients. This is used to make a tentative diagnosis. Angina and post-attack ECG changes. The patient is 67 years old.

Laboratory-instrumental examination.

- Complete blood count – Nv (rule out anemia)
- Blood
- Cholesterol
- Chest x-ray - heart size
- EKG

Comparative diagnosis. Pain? - nature, location, intensity, duration, irradiation, factors improving or aggravating the condition, connection with physical stress, atypical location of pain. Shortness of breath/fatigue (heart failure). Identify negative factors. Anamnesis specific to YUIK. Accompanying diseases. Family anamnesis.

Chest X-ray:



Norma

Cardiomegaly

EKG. When a patient with angina pectoris is at rest, $\frac{1}{4}$ of the patients have no pathology on their ECG. In an attack, depression of the ST segment is registered on the ECG, a negative or sharp-pointed or high T wave, conduction and rhythm disorders. Sometimes the ST segment is elevated, which indicates vasospasm or acute myocardial infarction.

Stable angina on exertion:

- FK1 – usually physical exertion does not trigger a pain attack (strong physical activities can trigger pain),
- FK2 – limiting light exercise (climbing the stairs to the 1st floor or climbing a mountain causes a pain attack).



- FK3 – limitation of usual physical exercises (walking on a flat road or climbing the 1st floor causes pain).
- FK4 – unable to exercise at all (pain at rest).
- **Variant angina or Princemetal angina:**
- Pain often occurs at rest or when excited, accompanied by rapid heart rate, shortness of breath, aggravated by light stress. ST segment elevation is characteristic on ECG. The drug of choice is nifedipine.

Unstable angina. The duration of the attacks is long, the intensity of pain has increased, antianginal drugs have changed from the usual dose, and the general condition has worsened. ST depression on ECG. Such patients should be admitted to the intensive care unit of the hospital immediately.

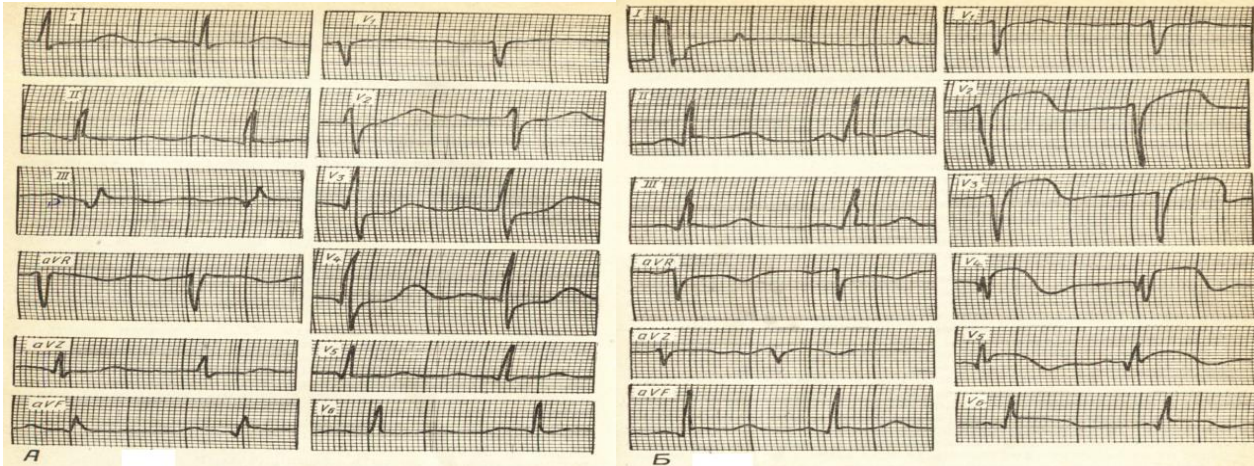
Transport the patient. Once every 12 months they should undergo the following inspections:

- General blood analysis (hemoglobin).
- Blood sugar and lipids.
- EKG.
- Blood pressure measurement.
- Education for a healthy lifestyle.

Medicinal treatment in acute attack. Nitroglycerin is inhaled from 1 tablet to 6-9 tablets or in the form of an aerosol for 3-15 minutes. If there is no attack within 20 minutes after 300-600 µg of nitroglycerin, it can be considered an acute myocardial infarction. Aspirin can be prescribed up to 300 mg.

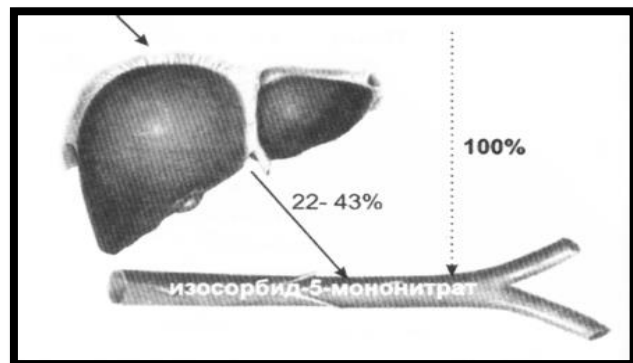
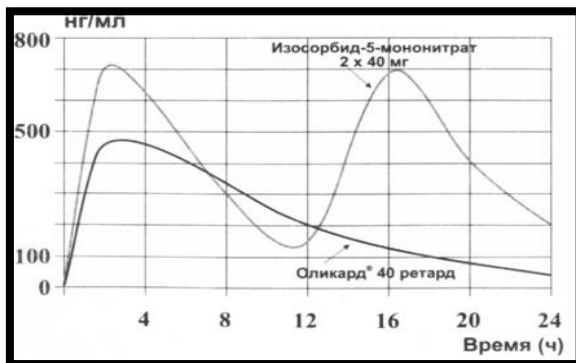
Prevention of angina attacks.

- Precipitating conditions should be treated: AG, SN, arrhythmias and heavy physical exertion, emotional stress, cold weather should be avoided. Nitroglycerin should be placed under the tongue before physical activity. Long-acting nitrates - cardiket 10-40 mg orally 1 tablet 1-2 times a day or isosorbide mononitrate 10-40 mg 2 times.
- Beta-blockers: Metoprolol 25-100 mg/day. Atenolol 25-100 mg/day. Propranolol 10-80 mg/day.
- Contraindication: bradyarrhythmias, severe heart failure, bronchospasm. Calcium antagonists: Verapamil 40-360 mg. Diltiazem 40-360 mg. Amlodipine 5-10 mg.
- Aspirin 75 mg daily after meals.



Ischemic heart disease (CHD) treatment goal

- -Improve the outcome of the disease and the patient's quality of life. Aspirin up to 325 mg/milk
- Beta-blockers (metoprolol, atenolol 50-100 mg/milk).
- - Statins (simvastatin, atorvastatin: 10-40 mg/milk). As a result of taking this drug, the death rate is reduced by about 30%.
- -Nitrates: Izorbid 5-mononitrate 10-40 mg/day. Isosorbide dinitrate 5-20 mg 3-5 times a day or 10-60 mg 1-2 times a day
- -Calcium antagonists: Verapamil retard up to 240 mg/milk. Diltiazem retard 270 mg/day.
- - Expands the large coronary arteries and improves oxygen supply to the ischemic myocardium. Limits the center of necrosis.
- -Improves collateral blood circulation. Inhibits platelet aggregation.
- -Improves myocardial contractility in patients with QAE.
- -Expands venous blood vessels and reduces preload on the myocardium. In large doses, it expands arteries, reduces low blood pressure, and reduces general blood-vascular resistance.





References:

1. Suyunov N.D., Talipova D.A.q., Abduxaliqova N.O'. Yurak-qon tomir kasalligida qo'llanadigan dori vositalari iste'molining tahlili // Farmatsiyevtika jurnali. – 2018. – № 1. – B. 9-1
2. Ichki kasalliklar propedevtikasi: / A. Gadayev, M. Sh. Karimov, X. S. Axmedov, – T.: «Muharrir» nashriyoti, 2012, ___ b