

Symptoms in cardiovascular diseases



Heart complaints

Chest pain

Angina pectoris

Heart attack pain

Cardialgia (non-coronary pain)

- Palpitations and interruptions in the work of the heart
- Fainting (loss of consciousness, syncope)
- Dyspnea (shortness of breath)
- Cough
- Weakness and fatigue
- Edema

Causes of chest pain

- Heart disease Ischemic heart disease Pericarditis
- Vascular disease Aortic dissecting aneurysm PE
- Diseases of the lungs Pleurisy Pneumothorax

- Diseases of the gastrointestinal tract
 Esophagitis
 Peptic ulcer
 Cholecystitis
 Pancreatitis
- Diseases of the musculoskeletal system
- Psychogenic pain Fibromyalgia

Angina pectoris





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Pathogenesis of angina pectoris The lumen of the artery is narrowed by plaque by 60-70% Inability to increase coronary blood flow with an increase in myocardial demand for O2 (increased heart rate, blood pressure, contractility) Supply of the O2 does not meet the O2 demand **Myocardial Ischemia** Angina pectoris

Clinical features of angina pectoris

- Discomfort or pain of a pressing, squeezing character, a feeling of heaviness
- Typical localization behind the breastbone
- Irradiation to the neck, jaw, epigastrium, or arms
- Duration of an angina attack minutes

- Provoked by physical or psycho-emotional stress
- The pain goes away at rest, s/l nitrates relieve the pain in 30 seconds or a few minutes
- Associated symptoms: fear, sweating, palpitations, arrhythmias, shortness of breath



Heart attack pain



Pathogenesis

Plaque rupture with thrombus formation at the rupture site CA occlusion No flow and O2 delivery Severe and prolonged myocardial ischemia Heart attack pain

Feature

- The pain is similar in character to angina pectoris
- Stronger and longer lasting (> 30 min)
- Does not go away at rest and after taking nitroglycerin
- Can be stopped with narcotic analgetics
- Often accompanying symptoms: cold sweat, palpitations, shortness of breath, fear of death





NonCoronary pain

- NCP nonspecific chest pains of various nature
- Are established by excluding all other causes of chest pain, primarily angina pectoris

Palpitation

- The sensation of P occurs with an increase in heart rate and / or an increase in the work of the heart
- Constant heartbeats (sinus tachycardia with HF or with thyroid hyperfunction)
- Sudden heartbeats
 - Rhythmic (paroxysmal tachycardia) or irregular heartbeat (atrial fibrillation)
- Ask patient: how attacks are provoked and stopped?
- Duration and frequency of attacks?
- Concomitant symptoms (severe heart rhythm disturbances cause: a decrease in cardiac output presyncope and syncope, ALVF dyspnea, ischemia angina pectoris)

Interruptions of heart beats

- Feeling of extra beats or pause
- Causes: extrasystoles, atrial fibrillation
 Ask patient:
- About provocation and relief
- How often there are happened ?



Syncope (fainting)

The main reason of cardiogenic fainting – sudden decrease of the cardiac output and brain arterial flow deficiency.

Causes:

- Cardiac arrhythmias bradycardia HR < 35-40, tachycardia HR > 150
- Acute myocardial infarction
- Pulmonary embolism

Shortness of breath

- Shortness of breath a painful sensation difficulty breathing
- The degree of shortness of breath is determined by the level of physical activity
- Cardiac dyspnea is a manifestation of LV
 HF



In severe LV HF, dyspnea appears when lying down - ortopnea

Pathogenesis : in the supine position
 ↑ P hydrostatic in the lungs due to the redistribution of fluid from the veins of the LE to the vessels of the chest → increased pulmonary congestion

Nocturnal attacks of cardiac asthma

- Attacks of severe shortness of breath and coughing at night (in the 1st half), which cause the patient to awaken
- Pathogenesis

↓ adrenergic myocardial stimulation
 Increased blood volume ("resorption" of edema) and venous return

A sharp increase in pulmonary congestion

Cough

- Cough is common in LV HF
- Characterized by the appearance of a dry cough with exertion or lying down (often with shortness of breath)
- Pathogenesis edema of interstitial and bronchial tissue with pulmonary congestion

Fatigue and weakness

- Frequent and earliest but nonspecific symptoms of LV HF
- Pathogenesis

Inability of the heart to provide the necessary blood flow for muscle function

Life history

- Age an increase in the prevalence of arterial hypertension and the likelihood of CHD with age (men> 55 years, women> 65 years - CVD RF)
- Gender male gender is a risk factor for CVD
- Childhood period:
- frequent sore throats rheumatic fever
- frequent acute respiratory infections, pneumonias, stunting – CHD
- Lifestyle and dietary habits
 - sports loads
 - hypodynamia lack of exercise (RF CVD)
 - food rich in animal fats and cholesterol
 - occupation (stress, hypodynamia, night job)

- Bad habits
 - smoking (RF CVD)
- 📫 alcohol abuse
 - Gynecological history postmenopause (RF CVD)
 - Family history (hypertension, diabetes mellitus, ischemic heart disease, MI, SD, strokes; early onset of CVD in close relatives)

Smoking accelerates the aging of blood vessels and heart !!!

General examination

- The severity of the condition is determined
 - by the severity of heart failure,
 - by presence of the coronary syndrome, or high blood pressure
- Consciousness can be impaired with a sharp increase in blood pressure or a fall in CO (cardiogenic shock)
- Ortopnea position with severe LV heart failure

 Anthropometry BMI (20-25 kg/m² and waist (80/94 sm)

Obesity and overweight - RF CVD (hypertension, ischemic heart disease, diabetes mellitus)

Skin

- Acrocyanosis (peripheral cyanosis)
 ↓ cardiac output → slowing blood flow → ↑ O2
 extraction from blood → ↑ concentration of
 dezoxyhemoglobin
- Central (diffuse) cyanosis (right-to-left shunt with CHD or lack of the oxygenation of blood in the lungs)
- Joundice of the skin (cardiac fibrosis of the liver)
- Cold, moist skin (vasoconstriction in severe LV HF)
- Xanthomas and xanthelasms (deposition of cholesterol in the skin with dyslipidemia)

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B

Edema

• Pathogenesis

RV HF ↑ P in veins ↑P in capillars Fluid transudation to the interstitium Edema

Features of cardiac edema

- Symmetrical, cold, cyanotic
- Distributed by gravity
- Strengthen in the evening, decrease in the morning
- When pressed, a fossa remains
- Visible swelling occurs when > 3 L of fluid has accumulated

Investigation of the lungs in cardiac patient

- Percussion dull sound sign of hydrothorax
- Fine crackles (late inspiratory) in lower lobes bilateraly – pulmonary congestion

Examination and palpation of the heart area

Apex beat

Localization (left or left and downward displacement in LV hypertrophy and dilation)

Area (an increase of more than 2 cm – LV dilation)

Duration (long-term AB reflects LV pressure overload in hypertension or AS)

- Pathological pulsations (beats)
- Precardiac beat 3-4-5th i/s to the left of the sternum (dilation and hypertrophy of the RV)
- Epigastric pulsation (dilation and hypertrophy of the RV)
- In the 2nd i/s on the left pulsation of the PA (PAH, increased pulmonary blood flow)
- In the 2nd i/s on the right aortic pulsation (aneurysm of the ascending part of the aorta)

- Heart murmur over the region of the heart palpable low-frequency vibration of the chest wall, caused by a heart noise (appears with an intense noise)
- Apex systolic murmur mitral insufficiency
- Systolic murmur at the base of the heart:
 - on the right AS (performed on the vessels of the neck)
 - diastolic murmur at the base of the heart on the right aortic insufficiency

Acrocyanosis

