

## CARDIOVASCULAR DISEASES CLASSIFICATION, TYPES, SYMPTOMS, PREVENTIVE MEASURES

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**Abstract.** *Cardiovascular disease (CVD) is a common name for heart and blood vessel pathologies. Currently, this group of diseases is the leading cause of death and disability in the world, including in Uzbekistan.*

**Keywords:** *epidemiology, types of cardiovascular diseases, prevention strategy, prevention.*

According to the WHO, 17.9 million people died from STDs worldwide in 2016, which is 31% of all deaths. 85% of them were due to myocardial infarction and stroke. More than 75% of deaths occur in low- and middle-income countries, almost equally among men and women.

State indicators

According to the information provided by the State Statistics Committee of Uzbekistan, almost 64% of deaths in the first quarter of 2019 were attributed to the YTK. In particular:

### **Arterial hypertension**

Arterial hypertension (AG) is a blood pressure of 140/90 mm Hg or higher. Primary, essential arterial hypertension (also hypertensive disease) is not related to the presence of pathological processes and is caused by reasons that can be eliminated in modern conditions. This is the most common cardiovascular pathology. Symptomatic or secondary hypertension is a consequence of cardiovascular diseases, pathology of the endocrine system or other conditions.

### **Ischemic heart disease**

Ischemic heart disease (IHD) (including stable and unstable angina pectoris, myocardial infarction) is damage to the myocardium caused by impaired blood circulation along the coronary arteries. Coronary artery atherosclerosis is often considered to be the cause of CHD on the background of dyslipidemia. Dangerous forms of the disease and one of the main causes of death is myocardial infarction.

### **Cerebrovascular diseases**

Cerebrovascular diseases, or cerebrovascular diseases, are a group of diseases that involve damage to the blood vessels that supply blood to the brain. Among the acute cerebrovascular diseases, the most dangerous type is stroke, which is the second leading cause of death and disability in the world.

A stroke can be of two types:

Ischemic (cerebral infarction) is caused by acute focal ischemia.

Hemorrhagic - characterized by bleeding into the brain due to rupture of blood vessels.

Heart rhythm and conduction disorders

This term combines several conditions characterized by changes in the frequency, regularity and source of the heart's electrical impulses. According to the definition of the working group of WHO experts, cardiac arrhythmia is any deviation from the normal sinus rhythm. Cardiac arrhythmias are a common clinical phenomenon that can occur due to almost any cardiac pathology.

### **Cardiomyopathy**

Diseases associated with primary damage to the myocardium. To date, there is no general definition and classification of cardiomyopathy. According to the definition of the Working Group on Myocardial and Pericardial Diseases of the European Society of Cardiology (2008), cardiomyopathy is the presence of structural and functional changes in the heart muscle in the absence of CHD, arterial hypertension, acquired and congenital heart disease. .

### **Congenital and acquired heart defects**

There are many classifications of birth defects. They are conditionally divided into 2 groups:

1. White (arterial and venous blood do not mix, with left-right flow of blood). Includes 4 groups:

With enrichment of the small circulatory circle (open arterial tube, intercompartmental and interventricular barrier defect, AB-communication, etc.);

With weakening of the small circulatory circle (isolated pulmonary stenosis, etc.);

With weakening of the large blood circulation circle (isolated aortic stenosis, coarctation of the aorta, etc.);

Without significant disturbance of systemic hemodynamics (dispositions of the heart — dextro-, sinistro-, mesocardia, cardiac dystopia — neck, chest, ventral).

2. Blue (with right-left flow of blood, mixing arterial and venous blood). Includes 2 groups:

With enrichment of the small blood circulation circle (complete transposition of the trunk vessels, Eisenmenger complex, etc.).

With weakening of the small circle of rotation (tetrad of Fallot, Ebstein's anomaly, etc.).

In 2000, the International Nomenclature was developed to create a general classification system for birth defects.

### **Acquired vices:**

Mitral heart defects: mitral stenosis, mitral regurgitation (insufficiency).

Aortic heart defects: aortic stenosis (common heart disease in adults), aortic insufficiency.

### **Heart failure**

Heart failure is a disorder of the structure and function of the heart that results in the heart not being able to deliver enough oxygen to meet tissue demand, despite normal blood pressure and arterial perfusion. Pathology is manifested by shortness of breath, rapid fatigue, swelling, nails and cyanosis (blueness) of the lip-nasal triangle at rest or with some activity.

### **Infective endocarditis**

A disease with a combination of vegetations in the damaged area as a result of inflammatory changes in the inner membrane of the heart, signs of widespread infection and circulatory disorders.

### **Myocarditis**

Myocarditis is a combination of clinical and morphological changes in heart tissue (cardiomyocytes, connective tissue, conduction system cells, etc.) when inflammation of the myocardium of an infectious or autoimmune nature is proven or reasonably suspected. Pericardium is an inflammation of the serous membranes, characterized by the appearance of exudate in its cavity and the possibility of adhesions and scarring of the membranes.

### **Heart tumors**

Tumors can be of good quality (about 70% of all tumors) and bad quality (about 30%).

### **Heart damage**

Cardiac injuries — heart damage as a result of mechanical force with or without penetration.

### **Diseases of the aorta**

Aortic aneurysm is an expansion of the aortic cavity by half or more due to various pathological mechanisms that lead to a decrease in the strength and flexibility of the vessel wall.

### **Peripheral vascular diseases**

Peripheral artery diseases are syndromes associated with damage to extracranial, visceral, and renal arteries, abdominal aorta, and limb arteries. In terms of prevalence, the most important are the complications of atherosclerosis and diabetes mellitus reflected in the vessels. At the same time, there are a number of other nosologies caused by vascular pathology. For example, diseases caused by degenerative damage of arterial paths (Ehlers-Danlos, Marfan syndrome, Erdheim's tumor, neurofibromatosis) can lead to the formation of aneurysms and plaques. Fibromuscular dysplasia often causes damage to the kidney, carotid and iliac arteries. In systemic vasculitis and connective tissue diseases, many injuries of blood vessels are noted:

Large vessels (aorta and its parts) — giant cell arteritis (Horton's disease), Takayasu's disease, Behçet's syndrome, vasculitis accompanying arthropathy;

Medium-diameter arteries — nodular periarteritis, giant cell arteritis, Wegener's granulomatosis, Cherga-Strauss syndrome, Kawasaki disease, radiation damage to blood vessels;

Small vessels (arterioles and capillaries) — systemic scleroderma, systemic lupus erythematosus, rheumatoid arthritis.

In addition, Buerger's disease can be distinguished separately. It is characterized by thrombosis and acute inflammation of the arteries and veins of the hands and feet. Vasospastic diseases (which are based on vasoconstriction of muscle-type vessels) include migraine, Raynaud's syndrome and disease.

### **Pulmonary hypertension**

Pulmonary hypertension is a group of diseases characterized by a progressive increase in pulmonary vascular resistance that leads to the development of right ventricular failure and premature death. Venous thromboembolic complications is a general concept that combines subcutaneous, deep venous, as well as pulmonary thromboembolism. Symptoms of life-threatening STDs

### **Myocardial infarction symptoms:**

The main symptom of the disease is severe pain. Myocardial infarction pain is located behind the chest, it is expressed by a burning sensation and a feeling like a dagger, some patients describe the pain as "splitting". The pain can spread to the left arm, lower jaw, between the shoulder blades. The development of this condition does not always come after physical exertion, often the pain syndrome occurs at rest or in the evening.

A heart attack can be accompanied by:

Difficulty breathing, shortness of breath, cough; Nausea, vomiting; Dizziness; Weakness, loss of consciousness; Cold sweat, shivering, paleness; Heart palpitations, interruptions in the work of the heart; Emotional excitement, fear. About 25 percent of myocardial infarctions occur without any symptoms.

Stroke symptoms: Sudden weakness of one arm and / or leg; Numbness of one side of the face or one limb; Facial asymmetry; Sudden speech disorder; Confusion or loss of consciousness; Sudden loss of vision in one or both eyes; Sudden severe headache for unknown reasons.

Atherosclerosis is the main reason for the development of ischemic diseases of the cardiovascular system. This disease can be asymptomatic for a long time, and only after a while it can lead to angina pectoris, chronic cerebrovascular insufficiency, myocardial infarction, stroke, and sudden death.

The main risk factors for atherosclerosis are:

Age    Men > 40 years, women > 50 years or early menopause

Smoking    Even when smoking a small amount of cigarettes

Hypertension    Blood pressure  $\geq 140 / 90$  mm.sm.ust or regular use of antihypertensive agents

Type 2 diabetes    Fasting glucose > 6.1 mmol/L (110 mg/dl)

Early-onset HF in close relatives,    myocardial infarction or unstable angina in men aged <55 years, women aged <65 years

Familial hyperlipidemia    type IIa, IIb and III hyperlipidemia

Abdominal obesity    Waist circumference: > 94 cm for men, > 80 cm for women or body mass index  $\geq 30$  kg/m<sup>2</sup>

Chronic kidney disease    with decrease in TFT < 60 ml / minute SBY or glomerulonephritis, tubulointerstitial nephritis, pyelonephritis, structural pathology of kidneys

According to WHO, alcohol abuse is also a serious risk factor for STDs.

### **Prevention strategy**

There are two main strategies for preventing STDs: population-wide (population strategy) and individual interventions (also called "high-risk" strategies). Both types of measures are highly effective and can be implemented even when resources are scarce.

This strategy is aimed at identifying individuals with a high cardiovascular risk among the population as early as possible and implementing active preventive measures aimed at minimizing these risk factors. Determining the category of persons with a high risk of developing cardiovascular diseases is mainly carried out within the framework of clinical dispensation. Modifiable risk factors are corrected as preventive measures. In some cases, special drugs may be prescribed.

### **Prevention**

Primary and secondary prevention of STDs is different. Primary prevention — prevention of disease development, secondary prevention — prevention of complications of cardiovascular diseases (for example, repeated myocardial infarction or stroke).

Secondary prevention is carried out in two stages: Regular dispensary examination of patients by cardiologists and district doctors in primary health care institutions; Specialized, including high-tech medical care, medical rehabilitation, sanatorium-spa treatment.

All patients with CKD should undergo the following in order to receive treatment without recurrence of the disease and to prevent complications: Timely consultation of a specialist doctor; Conducting analyzes to check the presence of indications for special treatment; Specialized in the presence of instructions, including high-tech treatment; Preventive consultation and prevention of negative factors.

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