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DEVELOPMENT MECHANISMS OF CHRONIC HEART **FAILURE**

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Abstract: Today, people around the world die from many different dangerous diseases, the main ones of which are heart diseases. You will be able to get more and more complete information about heart failure disease, its occurrence, symptoms, origin, diagnosis, prevention and treatment. This article provides information about the mechanisms of development of chronic heart failure.

Key words: Chronic heart failure, blood, oxygen, beta blockers, lungs.

Chronic heart failure is a disorder of the heart (pump) function with corresponding symptoms, which consists in the inability of the circulatory system to deliver the amount of blood necessary for the normal functioning of the organs and tissues. In heart failure, heart function decreases. The heart muscle cannot produce the energy needed to pump the required amount of blood in the body. Heart failure is an acute or chronic condition caused by weakening of the myocardial contractility and damping events within the large or small blood circulation. It is manifested by panting at rest or with some activity, rapid fatigue, swelling, cyanosis (bruising) of the nails and the lip-nasal triangle.

Acute heart failure is dangerous with the development of pulmonary edema and cardiogenic shock, and chronic heart failure leads to the development of organ hypoxia. Heart failure is one of the most common causes of human death. In heart failure, the decrease in the contractile (pumping) function of the heart leads to an imbalance between the hemodynamic demands of the body and the ability of the heart to satisfy this need. This imbalance is manifested by the predominance of the venous flow to the heart over the ability of the heart to pump blood into the arterial system and the resistance that the myocardium must overcome to drive blood into the veins, develops as a complication of pathologies: valve defects of the heart, ischemic disease, cardiomyopathy, arterial hypertension, etc. In some diseases (for example, arterial hypertension), the increase in the manifestation of heart failure gradually increases over the years, but in other cases (acute myocardial infarction), when a part of the functional cells die, it is time is reduced to days and hours. In the acute development of heart failure (minutes, hours, days), we talk about its acute form. In other cases, heart failure is considered chronic.

Many patients initially develop left heart failure. The most frequent complaint is inspiratory dyspnea, initially associated with exercise, orthopnea, paroxysmal postural, and dyspnea at rest. Complaints of non-productive cough and nocturia are characteristic. Patients with SYuFE note weakness, fatigue, which is a decrease in blood supply to skeletal muscles and the central nervous system.

Medications (such as ACE inhibitors, beta blockers, and diuretics) are used in chronic heart failure. Medicines are used to prevent complications and improve quality of life. ACE inhibitors and beta blockers can prolong life, but in order to be useful, they must be taken regularly and under the supervision of a doctor. In addition, rhythm therapy (for the treatment of cardiac arrhythmias) and implantation of a three-chamber pacemaker are used. A defibrillator is also used as a pacemaker to counter dangerous disturbances. This treatment is also called resynchronization therapy. Physical therapy is an important part of successful treatment.

Left ventricular heart failure (LVH) is a heart failure that occurs when the left heart is damaged and overloaded, and is characterized by clinical signs of advanced venous congestion in the pulmonary circulation. Left ventricular failure is manifested by a decrease in cerebral circulation (dizziness, darkening of the eyes, fainting) and a decrease in coronary circulation (angina), which is characteristic of aortic malformation, coronary heart disease, arterial hypertension, obstructive cardiomyopathy.

According to the type of right ventricle, YY is a type characterized by insufficient ejection of blood from the right ventricle to the pulmonary artery and stagnation of blood in the systemic circulation. Depending on how quickly heart failure develops, it is divided into acute and chronic types. . Acute heart failure can be associated with trauma, toxins, heart disease and can quickly lead to death if not treated. Chronic heart failure develops over a long period of time and is manifested by a complex of characteristic symptoms (shortness of breath, fatigue and decreased physical activity, edema, etc.), which are associated with insufficient perfusion of organs and tissues during rest or physical exercise, and are often associated with fluid retention in the body. In chronic heart failure, a decrease in the pumping function of the heart leads to the secondary activation of sympathoadrenal and renin-angiotensin-aldosterone, on the one hand, and vasopressin and atrial peptides, on the other. The process mediates peripheral and renal vasoconstriction, leading to a decrease in glomerular filtration rate, which in combination with already reduced arterial filling pressure leads to secondary activation of the RAAS. Activation of the RAAS increases aldosterone secretion and thereby ensures the correct perfusion pressure in the tissues due to increased reabsorption of sodium and water by the proximal nephron tubules. Stimulation of the release of vasopressin from the posterior pituitary in response to the activation of baroreceptors, which respond to a decrease in filling pressure. will happen. An increase in the level of ADH leads to myocardial fibrosis, hypertrophy and vasoconstriction, as well as increased reabsorption of water in the collecting ducts of the nephrons, despite the already

existing overload of the heart with the circulating blood volume in the form of stretching of the atrial tissue and low plasma osmolarity.

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