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Detection of Chronic Heart Failure in Patients with Hypertension

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Abstract: Chronic heart failure is a global problem, affecting 1-2% of the population and approximately 64 million people worldwide. In patients with arterial hypertension, a compensatory mechanism develops under constant high pressure, causing hypertrophy of the left ventricle and chronic heart failure with initially preserved ejection fraction, and later chronic heart failure with reduced ejection fraction. Detection of chronic heart failure in patients with arterial hypertension in the early stages and the use of necessary treatment measures have a positive effect on the disease and lead to preserving of ejection fraction.

Keywords: arterial hypertension, chronic heart failure, heart rate.

Arterial hypertension is a life-threatening disease that causes stroke, peripheral artery disease, myocardial infarction, and kidney disease. The prevalence of hypertension in the general population is 35-40%. The results of the research showed that the blood pressure is 20 mm Hg. increase increases the risk of developing heart failure by 50% [1,5].

As a complication of hypertension, asymptomatic left ventricular hypertrophy and chronic heart failure with preserved and reduced stroke volume develop. Diamically high blood pressure affects the size and wall thickness of the left ventricle, and as a result, hypertrophy and even ischemia can develop. This is caused by the development of the remodeling process in response to high pressure [2-4,7].

Chronic heart failure can develop even with reduced and preserved stroke volume. Hypertension causes hypertrophy of the left ventricle, then diastolic dysfunction, and systolic dysfunction at the last stage (Fig. 1).

The chronic form of heart failure, unlike acute heart failure, begins asymptomatically and develops gradually. At the initial stage of the disease, there are no clear signs, heart failure can be detected only during a medical examination [6,8,9]. Over time, the patient's shortness of breath is observed during physical activity, and in the last stages of the disease, it can be observed even when the patient is at rest.

Factors causing the development of chronic heart failure:

Hypertension is the main factor in the development of chronic heart failure;

Ischemic heart disease;

Cardiomyopathies;

Defects of the valve apparatus;

Congenital and acquired heart defects; □□Arrhythmias;

Pericardial and endocardial diseases;

Disruption of the heart conduction system (blockades);

Mechanism of development of chronic heart failure as a result of hypertension.

Classification of chronic heart failure according to N. D. Strajesko, V. Kh. Vasilenko (1935).

The patient's condition is assessed by clinical signs of the disease.

Stage 1. The initial, hidden lack of blood circulation is manifested only during physical activity (shortness of breath, increased heart rate, extreme fatigue). These phenomena disappear with rest. Hemodynamics are not disturbed.

Stage 2. Long-term circulatory failure, hemodynamic disorders (stagnation in pulmonary and systemic blood circulation), organ and metabolic disorders are manifested even at rest. Work capacity is limited. This stage is divided into 2 groups according to severity:

□□2a period- Hemodynamic disorders are moderate, dysfunction of a certain part of the heart is noted (right or left ventricular failure).

□□2b period - hemodynamic disorders involving the entire cardiovascular system develop, severe hemodynamic disorders are observed in small and large areas.

Stage 3. Development of final, terminal dystrophic processes. Insufficiency of blood circulation, permanent changes in metabolism and functions of organs, development of irreversible dystrophic processes in the structure of organs and tissues are observed. The patient completely loses his ability to work.

New York Heart Association Functional Classification:

It was adopted by the New York Heart Association (NYHA) in 1964. This classification is used to describe the severity of symptoms, based on which four functional classes (FS) of the disease are distinguished.

First Class FS. There are no restrictions on physical activity. Normal physical activity does not cause excessive shortness of breath, fatigue or palpitations.

Secondary FS. There is some limitation in physical activity. Physical activity can cause excessive shortness of breath, fatigue, or palpitations. These symptoms are not observed in the patient at rest.

Tertiary FS. Significant limitation of physical activity. Even less physical activity than usual can cause extreme shortness of breath, fatigue, or palpitations. These symptoms are not observed in the patient at rest.

FS of the fourth degree. Shortness of breath, shortness of breath, inability to perform normal physical activity are observed. Such symptoms are observed even when the patient is at rest. As a result of any physical activity, the above symptoms increase.

Classification according to changes in heart rate:

Chronic heart failure with low stroke volume (less than 40%); Advanced chronic heart failure with an average stroke volume (from 40

up to 49%);

Chronic heart failure with preserved stroke volume (50% or more) [10,11];

The main symptoms of heart failure:

• decreased tolerance to physical activity (fatigue, general weakness);

• shortness of breath during exercise;

• paroxysmal nocturnal shortness of breath (its presence indicates a poor prognosis of the disease);

• orthopnoea (breathing difficulty that occurs when the patient is lying down).

• leg swelling;

• as a result of severe chronic heart failure, progressive weight loss is observed and cardiac cachexia may develop.

In conclusion, it should be said that until the end of the last century, approximately 70% of patients diagnosed with heart failure died within the next five years. The development of medical science and modern treatment methods have made it possible to prolong the life of people with this diagnosis. Harmful habits include quitting smoking, controlling blood pressure for arterial hypertension, controlling blood sugar levels in diabetes, maintaining a normal body weight, and performing regular physical activity. Especially among the above-mentioned risk factors, constant control of blood pressure helps to prevent chronic heart failure.

Reference

1. Haider AW, Larson MG, Franklin SS, Levy D. Systolic blood pressure, diastolic blood pressure, and pulse pressure as predictors of risk for congestive heart failure in the Framingham Heart Study. Ann Intern Med. 2003;138:10-16. [PubMed]
2. Magyar K, Gal R, Riba A, Habon T, Halmosi R, Toth K. From hypertension to heart failure. *World J Hypertens* 2015; 5(2): 85-92 [DOI: 10.5494/wjh.v5.i2.85]
3. Klara Magyar, Roland Gal, Adam Riba, Tamas Habon, Robert Halmosi, Kalman Toth, Magyar K, Gal R, Riba A, Habon T, Halmosi R, Toth K. From hypertension to heart failure. ,, From hypertension to heart failure'' Magyar K, Gal R, Riba A, Habon T, Halmosi R, Toth K. From hypertension to heart failure. *World J Hypertens* 2015; 5(2): 85-92 [DOI: 10.5494/wjh.v5.i2.85]*World J Hypertens* 2015; 5(2): 85-92 [DOI: 10.5494/wjh.v5.i2.85]
4. Douglas Ewan Cannie,1,,2 Mohammed Majid Akhtar,1,,2 and Perry Elliott ,, Hidden in Heart Failure''
5. М. С. Бекмурадова, Х. Д. Махмудова, Ф. Ю. Назаров ,, ДИАГНОСТИЧЕСКАЯ ЗНАЧИМОСТЬ МОЗГОВОГО НАТРИЙУРЕТИЧЕСКОГО ПЕПТИДА ПРИ ВЫЯВЛЕНИИ ХРОНИЧЕСКОЙ СЕРДЕЧНОЙ НЕДОСТАТОЧНОСТИ''
6. Tursunova L. D., Jabbarov O. O. Cardiorenal Syndrome in Patients with Chronic Kidney Disease and Diabetes Mellitus. – 2023.
7. ТУРСУНОВА Л. Д., ЖАББАРОВ О. О. РОЛЬ НАТРИЙУРЕТИЧЕСКИХ ПЕПТИДОВ В ЗАВИСИМОСТИ ОТ СТАДИИ ХРОНИЧЕСКОЙ БОЛЕЗНИ ПОЧЕК. – 2023.

8. ТУРСУНОВА Л. Д., ЖАББАРОВ О. О. СУРУНКАЛИ БУЙРАК КАСАЛЛИГИ ВА СУРУНКАЛИ ЮРАК ЕТИШМОВЧИЛИГИДА ГИПОТЕНЗИВ ДАВОНИНГ САМАРАСИ. – 2023.
9. Jabbarov O. O. et al. Pathogenetic Factors Development of Diabetic Nephropathy //American Journal of Pediatric Medicine and Health Sciences (2993-2149). – 2023. – Т. 1. – №. 9. – С. 310-317.
10. Jabbarov O. O. et al. Disorders Function of the Heart and Kidney in Diabetes Mellitus //Central Asian Journal of Medical and Natural Science. – 2023. – Т. 4. – №. 6. – С. 609-613.
11. Tursunova L. D., Jabbarov O. O. Association of the Leu28pro Polymorphic Markers of the Apoe and Pro12ala of the Pparg2 Gene in Diabetic Nephropathy in Type 2 Diabetes Patients. – 2023.