

EMERGENCY THERAPY TO PREVENT COMPLICATIONS IN HYPERTENSION WITH HYPERTENIC CRISIS

Nodirov Sarvar Ne`matovich

Samarkand State Medical University 1st year ordinator of cardiology department

Makhmasoliyev Javlonbek Iskandarovich

Samarkand State Medical University 1st year ordinator of cardiology department

<https://doi.org/10.5281/zenodo.14882604>

Urgent therapy aimed at preventing complications in hypertensive patients with hypertensive crisis.

Abstract: *Hypertonia (from the Greek word hyper means high, high tone means tension) is an increase in the tone (tension) of organs and tissues relative to the norm. It is a pathological process in the neuro-functional state of central and peripheral blood vessels. An increase in blood pressure caused by an increase in the tone of small-caliber arteries is called hypertension. A hypertensive crisis occurs when the compensatory mechanisms are not able to reduce the increased blood pressure to improve the condition of the body. In this case, the increase in blood pressure is accompanied by severe anxiety, severe pain in the head and heart, nausea, vomiting, and other clinical symptoms. A hypertensive crisis is always a threat to people's lives, and failure to provide high-quality rapid intensive therapy can lead to the above-mentioned complications.*

Key words: *Hypertensive crisis, compensatory mechanism, hypertension, neuro-functional, intensive therapy, atherosclerosis, stress, acute coronary syndrome, hemorrhagic stroke.*

Hypertension is a common (up to 70-80%) arterial blood pressure increase in people in the form of primary (essential) arterial hypertension, symptomatic arterial hypertension (adopted by WHO in 1978). According to the conducted investigations, hypertension is one of the main causes of disability and limitations in life activities in the world. According to statistics, if first aid is provided late when blood pressure increases, the condition of patients may worsen, and even death may occur. In most cases, the disease occurs after the age of 45, but according to the latest information, it is often observed among young people. This disease occurs equally in men and women. Prevalence According to the data of recent years, about 30% of the population over 20 years of age in the world has high blood pressure. The number of hypertensive patients currently reaches 45%. After the age of 65, this figure is 60-70%. More men suffer from this disease before 45-55 years, and women after 45 years. In our country, blood pressure is recorded in 20% of the

population, and in 27% of the 45-60 year olds. Hypertension was found in 12% of men and 17% of women aged 20-40. It is alarming that only 13% of these patients regularly, 39% occasionally received antihypertensive drugs, and 49.8% were not treated at all. The data of other authors show that the last of these indicators is even higher.

ETIOLOGY The causes and mechanisms of the disease have not yet been determined. A decisive importance is given to the combination of genetic predisposition and the influence of some external factors. The cause of the development of the disease is long-term stress and depression, frequent psychological stress. Often, these are caused by work activities that require constant emotional tension. In addition, concussion patients have a high risk of developing the disease. A hypertensive crisis is not just a sudden rise in blood pressure. An episodic increase in arterial blood pressure is also observed in relatively healthy people, for example, during heavy physical exertion, in severe stress situations, etc. In addition to an increase in blood pressure, a hypertensive crisis is also characterized by a number of symptoms that indicate a lack of general blood circulation. Corresponding to this factor, two groups of main types of crisis are usually distinguished. In the first type of crisis, the release of adrenaline increases, and in the second type, an increase in noradrenaline is observed. In the first case, the patient usually has only systolic (high) pressure, and in the second case, both systolic and diastolic (low) pressure. Hereditary predisposition is also one of the reasons: if a person's generation has this disease, then the risk of developing this disease increases several times. The main factor affecting the development of the disease is a sedentary lifestyle. As people age, atherosclerosis can develop, and the increase in blood pressure against the background of this change makes the situation more serious. This is extremely dangerous for life, because through the narrowed blood vessels, it is observed that the blood does not flow to the brain, heart, or part of the kidneys. If there are thrombus and cholesterol accumulations on the walls of blood vessels, they can break off during strong pressure, clog the capillary blood vessels, and prevent blood flow. In this case, myocardial infarction or stroke occurs. Hormonal changes during menopause can cause high blood pressure in women. Salt, or more precisely, the sodium contained in it, as well as smoking, consumption of alcoholic beverages, and obesity also put pressure on the cardiovascular system.

PATHOGENESIS An increase in the activity of the sympathoadrenal system and a change in the sensitivity of adrenoreceptors play a major role in the pathogenesis of hypertension. Disruption of blood circulation in the kidneys and the appearance of a substance (renin) that increases arterial pressure in the blood is one of the important links of pathogenesis. In the etiology and pathogenesis of hypertension, genetic factors and socio-economic environment, profession, as

well as constitutional-endocrine changes (excess mass, diabetes, hormonal dysfunction, especially during climacteric period) are of great importance. An increase in the activity of the sympatho-adrenal system leads to an increase in the work of the left ventricle and an increase in the cardiac output, which increases arterial pressure. Arterial pressure according to the nomenclature of the World Health Organization (WHO) (regardless of age) 139 / If it is not higher than 89, it is considered normal.

Urgent help. When a hypertensive crisis is observed, it is necessary to ensure the improvement of the physical and psycho-emotional conditions of the patients (bed rest, silence). A hot heating pad should be placed on his legs (careful not to burn his feet, or mustard with pepper should be placed on his legs, an ice pack should be placed on his head or a towel soaked in cold water, and he should be changed from time to time. In this case, all precautions should be taken so that the patient does not freeze to death. If the patient has pain in the head, slowly inject 5-10 ml of 25% magnesium sulfate solution into the vein. If the legs are cold, nitroglycerin is given under the tongue, and papaverine is injected into the muscle. In order to prevent or eliminate brain swelling, beta blockers are used.

REFERENCES

1. Braunvald E. Heart Disease: A Textbook of Cardiovascular Medicine. 11th ed. Elsevier, 2018.
2. Fuster V., Harrington R.A. Hurst's The Heart. 14th ed. McGraw-Hill, 2017.
3. Topol E.J. Textbook of Cardiovascular Medicine. Lippincott Williams & Wilkins, 2019.
4. Yusuf S., Reddy S., Ounpuu S. Global Burden of Cardiovascular Diseases: Epidemiology and Risk Factors. *Circulation*, 2020; 141(2): 120-129.
5. Benjamin E.J., Muntner P., Alonso A. Heart Disease and Stroke Statistics—2023 Update. *Journal of the American Heart Association*, 2023; 147:e153.
6. Nagueh S.F., Smiseth O.A., Appleton C.P. Recommendations for the Evaluation of Left Ventricular Diastolic Function by Echocardiography. *European Heart Journal*, 2021; 42(7): 156-176.
7. Khan M.A., Hashim M.J., Mustafa H. Global Epidemiology of Ischemic Heart Disease: Results from the Global Burden of Disease Study. *American Journal of Cardiology*, 2022; 130: 34-46.
8. World Health Organization (WHO): Cardiovascular Diseases (CVDs). <https://www.who.int/>

9. American Heart Association (AHA): Latest Guidelines and Research.
<https://www.heart.org/>
10. European Society of Cardiology (ESC): Clinical Practice Guidelines.
<https://www.escardio.org/>