

ETIOLOGICAL FACTORS CAUSING HYPERTENSION DISEASE AND MEASURES TO CONTROL IT

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Abstract: This article talks about hypertension, which is widespread among the population and is the most common among cardiovascular diseases. Hypertension, high blood pressure is the factor that plays the most important role in the development of cardiovascular diseases, the most dangerous of such complications are heart attack and stroke. Most elderly people suffer from this problem, but nowadays high blood pressure is also found in middle-aged and young people. When is the blood pressure reading considered dangerous? How is first aid given during a hypertensive crisis? What measures should be taken in the early stages of high blood pressure? You can find answers to such questions in this article.

Keywords: hypertension, cardiovascular disease, blood pressure, risk factors, stroke, heart attack, stress, atherosclerosis.

The normal value of blood pressure for an adult is a systolic (high) pressure of 120 mm Hg and a diastolic (low) pressure of 80 mm Hg. The first reading is when the heart is contracting, and the second pressure is when the heart is relaxing. Of course, these indicators are relative averages, each body has its own normal blood pressure. High blood pressure or hypertension is one of the most common diseases of the cardiovascular system today. The disease is manifested by an increase in arterial blood pressure, and often its indicator exceeds 140/90.

According to many experts in the field of cardiovascular diseases, hypertension often occurs as a result of blood circulation disorders. Heart failure is also included in the list of its causes. This disease can trigger the development of secondary diseases in patients, for example, stroke, heart attack. High arterial blood pressure has a negative effect on blood vessels, because they suddenly narrow for a short time. In very strong pressure, some blood vessels burst and internal bleeding is observed. Hemorrhagic infarction occurs in the organs where the vessels have lost their elasticity and are prone to fragility. Hypertension is a disease caused by a violation of the nervous-functional activity of blood vessels. The disease mainly occurs in people over 40 years old, but in recent years, it has been observed more often in young people. Both men and women suffer from hypertension. This disease is one of the leading causes of death among people with diseases of the cardiovascular system. Scientists have been

studying this disease for several decades. According to research, hypertension is one of the main causes of disability on our planet. According to statistics, if first aid is provided late when blood pressure increases, the condition of patients may worsen, and even death may occur. The main symptom of hypertension is headache due to spasm and narrowing of cerebral vessels. Also, noise in the ears, decreased visual acuity, weakness, sleep disturbances, dizziness, heaviness in the head, and increased heart rate are often manifested. These symptoms are noticeable in the early stages of the disease. Later, heart failure occurs due to long-term straining of the heart

The reason for the development of the disease is long-term stress and depression, frequent psychological stress. Often these are caused by work that requires constant emotional tension. In addition, concussion patients have a high risk of developing the disease. Hereditary predisposition is also among the reasons, if a person has this disease in his generation, 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 an increase in blood pressure against the background of this change makes the situation even more serious. This is extremely dangerous for life, because through 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, alcohol abuse, and obesity also put pressure on the cardiovascular system. In general, the factors affecting the development of hypertension are: Excess weight, metabolic diseases, endocrine diseases, sedentary lifestyle, regular emotional stress, depression, experiencing tragic events, loss of loved ones, problems in business, work. due to severe nervous tension, brain injuries (car accident, fall, hypothermia), chronic diseases with negative effects on the cardiovascular system (diabetes, gout, rheumatoid arthritis), genetic predisposition, viral and infectious diseases (meningitis, sinusitis, sinusitis), age-related changes in blood vessels, high level of cholesterol in the blood, as a result of which accumulations are formed on the walls of blood vessels, women who are in menopause, over 40 years old (the body's important hormonal o During these changes, hidden diseases often begin to develop and they can affect the development of hypertension). Harmful habits (smoking, drinking alcoholic beverages, excessive coffee consumption), consuming a lot of salt during the day, increasing adrenaline in the blood, sitting in front of the computer for a long time, walking less in the open air, etc. .

In the pathogenesis of hypertension, emotional influences lead to excessive tension of the main nervous processes. Initial functional disturbances occur in the cerebral cortex and hypothalamic area, limbic-reticular complex centers. As a result, the excitability of the hypothalamic vegetative centers, mainly the sympathetic nervous system, increases, which leads to the development of pressor reactions, which in turn leads to the damage of the dominant pathological weakening of the excitation of the sympathetic centers of the brain. In the initial stage of the disease, the increase in the tone of the sympathoadrenal system leads to an increase in the secretion of neurohormones of the renin-hypertensin-aldosterone system, which leads to an increase in the tone of blood vessels. In the last stages of hypertension, the antihypertensive activity of the kidneys ends. The strong secretion of renin leads to the appearance of a large amount of angiotensin, which increases the production of aldosterone, which leads to the accumulation of sodium in the walls of arterioles, which swell and thicken, which in turn increases the reactivity of blood vessels to various pressor factors (the ability to respond) increases.

Classification of hypertension

Classification of hypertension by pressure level

Category	Systolic AP, mm Hg.	Systolic AP, mm Hg.
Normal AB	< 130	< 85
High normal pressure	130-139	130-139
Hypertension I stage	140-159	90-99
II stage (average)	160-179	100-109
III Stage (severe)	180-209	110-119
IV Stage (severe)	210 and above	120 and above

Classification of hypertension according to target organ damage

Arterial hypertension stage	Target organ damage
I stage	There are no objective signs of target organ damage
II stage	From the following signs of target organ damage there will be at least one: - left ventricular hypertrophies - completely or locally of retinal arteries damage - proteinuria or low level of creatinine in the blood increase (1.2-2mg/dl Atherosclerotic plaques (aorta, carotid, iliac or X-ray and ultrasound data.
III stage	Target organ damage symptom complex Availability: Heart myocardial infarction angina pectoris heart deficiency Temporary disturbance of cerebral circulation Stroke Hypertensive encephalopathy Renal plasma creatinine level >2mg/dl Kidney failure Fundus with swelling of the optic nerve hemorrhage and exudation Collapsing aneurysm of the aorta Arterial occlusive lesions

In order to accurately diagnose the patient, the doctor will need to conduct several laboratory analyzes and hardware tests. The purpose of the diagnosis is to determine the stage of the disease and the degree of hypertension. With this information, the doctor will be able to choose an effective

treatment method. Since the early stages of the disease are hidden, most patients visit the doctor late. It is very difficult to completely cure the disease, so patients need to be patient, because the disease can accompany them for the rest of their lives. Therefore, it is necessary to prevent the disease in time, and if suspicious symptoms appear, it is necessary to undergo a doctor's examination.

GK diagnosis

Exclusion of symptomatic arterial hypertension according to the two-stage scheme method is carried out.

Phase I mandatory inspections

— anamnesis, complaints, palpation, percussion, heart and trunk vessels auscultation

— AB in arms and legs

— ECG, X-ray of lungs and heart

- the bottom of the eye

— kidneys UTT, EXOGG

— blood: OAC, urea, creatinine, cholesterol, triglycerides, potassium, sodium, glucose

— urine: general analysis, Zimnitsky, Nechiporenko tests, daily protein, bacteriuria.

Phase II data checks

Instrumental examinations: skull and Turkish saddle R-gram, EKG and AB

round-the-clock monitoring, rheography of cerebral vessels, heart, arms and legs, radioisotope examination of kidneys. Computed tomography of the skull and abdomen, aortography of the abdomen, MRI - tomography.

Specific features of anamnesis collection:

— Family anamnesis of AG and cardiovascular diseases

— history of cerebrovascular, kidney diseases, diabetes

— cases of AB increase in the anamnesis

— taking drugs (DV).

— patient's body mass, physical activity, consumed salt, fats and alcohol content, smoking

— Psychosocial conditions and environmental factors affecting AB.

Hypertension clinic

Clinical symptoms develop according to the stages of the disease and are determined by the damage to the target organs:

— Damage to the MNS

Main symptoms (symptoms): headache, dizziness, "little flies" in the eye, often on waking and usually in the nape of the neck

passing, rapid fatigue, nausea, bleeding from the nose, eyesight

disorder, temporary disorder of cerebral blood circulation manifested in paresthesias, paresis and paralysis in long-lasting AG or retinal stroke

retinal hemorrhage or swelling of the optic nerve.

-Symptoms of heart damage are long-lasting, throbbing pains, often over the heart, behind the sternum, in the left side of the chest, or a feeling of heaviness in the heart area, which gradually subsides as the blood pressure drops. . Excessive tension of the aortic walls, stimulation of mechanoreceptors of the left ventricular myocardium, and possibly ischemia of the subendocardial muscle layer cause pain.

Rapid heartbeat, difficulty breathing, edema (heart failure).

— Damage to the kidneys, thirst. polyuria nocturia hematuria edema

—Injury of peripheral arteries

Cold stiffness of the hands and feet, alternating lameness, therefore it is necessary to compare the pulse in the wrist and femoral arteries to determine the difference in the pulse wave and its arrival time. When patients with hypertension are examined, it is noted that they are affected, facial hyperemia, cyanosis of the lips, acrocyanosis, edema (may be related to the genesis of the heart and kidneys due to injuries). When examining the chest, it is possible to determine that the impulse of the tip of the heart has increased, it has moved to the left and down (due to left ventricular hypertrophy). On palpation, the impulse of the tip of the heart is spread, increased, resistant.

With the help of auscultation, it is possible to hear a weakened vesicular breath in the lower parts of the lungs, a small convex, moist, dull wheeze (heart failure). When listening to the heart, no pathological manifestations are noted at the beginning of the disease, then the second tone accent is detected over the aorta. A systolic murmur may be heard over the apex of the heart as a result of I attenuation and mitral valve insufficiency. Although the number of heart contractions is usually normal, there may be a tendency to both tachycardia and bradycardia. The pulse is strained, fast, hard, the vascular wall is thick. ECG shows left ventricular hypertrophy (high R wave, ST segment depression and negative T waves). Blockage of the left leg of the bundle of gis may occur. Examination of the fundus using a slit lamp makes it possible to identify narrowing of arterioles, dilation of veins (Salyus symptom), swelling of the optic nerve, hemorrhages, and degenerative foci in the retina.

Complications of hypertension

- Hypertensive crisis
- Hypertensive encephalopathy
- Stroke
- Myocardial infarction
- Heart failure
- Chronic kidney failure
- Retinal bleeding

Hypertensive crises are the most common - this is a rapid (for several hours) arterial additional increase in pressure. Hypertensive encephalopathy causes weakness, drowsiness, decreased memory and concentration, headaches, depression, is manifested by a decrease in mental ability. Hemorrhagic or ischemic disorders of cerebral circulation, facial asymmetry, etc.

The main principles of treatment of arterial hypertension: Drug - with drugs and treatment without drugs is carried out.

Non-pharmacological for the treatment or prevention of hypertension approaches include:

- reduce salt consumption (less than 5 g per day)
- include more fruits and vegetables in the diet
- increasing movement activity (gymnastics, walking)
- relaxation therapy, autogenic exercises, needle reflexotherapy, electrosleep
- harmful habits (smoking, alcohol, taking hormonal contraceptives)

Elimination

- limiting the consumption of foods rich in saturated fat
- eliminate/reduce trans fats in the diet

Drug treatment:

- diuretics
- ganglioblockers
- calcium antagonists
- vasodilators

- angiotensin-converting enzyme inhibitors.

Taking into account all the mentioned etiological factors, one of the important measures is to pay special attention to the older age group of the population. It is not a secret to anyone that cardiovascular diseases are getting younger, and this requires more attention from us. It is very important to create a healthy lifestyle among the population, to limit harmful habits, and to prepare proper food rations in the fight against hypertension.

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