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HYPERTENSION DIAGNOSTICS

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Annotation

Information about hypertension, its classification, mechanisms of development, elements of non-drug treatment and methods of preventing the disease are provided.

Key words: hypertension, nature of the course, treatment options, laboratory diagnostics, prevention.

Hypertension (HTN) is a chronic, stable increase in blood pressure, in which in people not receiving antihypertensive drugs, the level of systolic blood pressure is ≥140 mmHg. Art. and/or diastolic blood pressure level – ≥90 mm Hg. Art. (WHO and International Society of Hypertension recommendations 1999).

Arterial hypertension (AH) is a cause of heart attack and stroke. According to WHO estimates, >17.5 million people worldwide died from heart attacks and strokes in 2012.

When examining patients with suspected hypertension, it is necessary to exclude secondary hypertension, confirm a stable increase in blood pressure, identify the presence and degree of damage to target organs, assess the stage of hypertension and the degree of development of complications.

When collecting anamnesis, special attention is paid to the patient's exposure to risk factors for hypertension, complaints, level of increase in blood pressure, the presence of hypertensive crises and concomitant diseases.

To determine the presence and degree of headache, informative and dynamic measurement of blood pressure is recommended. To obtain reliable blood pressure readings, the following conditions must be met:

• the measurement should be carried out in a comfortable, quiet environment, after a 5-10 minute rest; It is recommended to exclude smoking, eating, tea, coffee, vasoconstrictor nasal and eye drops 1 hour before measurement;

• patient position – sitting, standing or lying, the hand is at the same level as the heart; the cuff is placed on the shoulder, 2.5 cm above the fossa of the elbow;

• at the patient's 1st visit, blood pressure is measured in both arms, with repeated measurements after a 1-2 minute interval; with blood pressure asymmetry >5 mm Hg. Art. subsequent measurements should be carried out on the arm with higher scores; in other cases, blood pressure is usually measured on the "non-working" arm;

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• certified devices should be used;
• deflate the cuff slowly (2 mm Hg/s).

Laboratory research. Mandatory tests:

• biochemical blood test (fasting glucose, total and high-density lipoprotein cholesterol, triglycerides, creatinine, uric acid and serum potassium);
• general blood test (hemoglobin and hematocrit);
• urine analysis (dipstick test and sediment examination);
• ECG.

Recommended additional research:

• EchoCG;
• Ultrasound of the carotid and femoral arteries;
• blood plasma glucose after meals (if fasting glucose level exceeds 6.1 mmol/l);
• C-reactive protein (high sensitivity);
• microalbuminuria;
• quantitative assessment of proteinuria (with a positive qualitative test);
• fundus examination (for severe hypertension)

Differential diagnosis Essential (primary) hypertension must be differentiated from secondary (symptomatic) hypertension. To suspect secondary hypertension, the patient's medical history is carefully studied; At the 1st stage, a thorough physical examination is performed.

Medical history such as polycystic kidney disease in close relatives, kidney disease, urinary tract infections, hematuria, abuse of analgesics (kidney parenchymal diseases), use of oral contraceptives, cocaine, amphetamines, glucocorticosteroids, non-steroidal anti-inflammatory drugs, cyclosporine, complaints of sweating attacks, headache pain, anxiety, palpitations (pheochromocytoma), attacks of muscle weakness and cramps (hyperaldosteronism) indicate secondary hypertension.

The following signs may also help to suspect secondary hypertension: skin signs of neurofibromatosis (pheochromocytoma), appearance characteristic of Cushing's syndrome, palpable enlargement of the kidney (polycystic disease), murmur in the projection of the renal arteries (renovascularization of hypertension), cardiac murmur or murmur in the precordial region (disease of the aorta or caorctation of the aorta). If secondary (symptomatic) hypertension is suspected, the patient is referred for consultation to other specialists.

Diagnosis of hypertension is performed by a cardiologist. To identify the disease and individualize treatment, the following methods are used:

• dynamic measurement of blood pressure;
• laboratory tests - clinical and biochemical blood tests, general urine analysis;
• electrocardiography, including in the form of Holter monitoring;
• ultrasound examinations: heart, kidneys and other organs;

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• Dopplerography (vascular ultrasound).

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