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## **Results of all-russian research “PERSPECTIVA” in Blagoveshchensk**

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**Abstracts:** Research, educational and sanitary program in the Russian Federation “PERSPECTIVA” (Prevention of cardiovascular risk in patients with hypertension, ischemic heart disease, atherosclerosis, and hyperlipidemia, heart rhythm disturbances. Reduction of cardiovascular morbidity and mortality in Russian Federation), initiated by the National Society, "Cardiovascular Prevention and Rehabilitation" a group of 44 ambulatory patients with AH was organized.

**Key words:** arterial hypertension, PERSPECTIVA, Indap.

The term "arterial hypertension" refers to symptoms of high blood pressure (BP) in "hypertensive disease" and "symptomatic arterial hypertension." Arterial hypertension (AH) - is a condition in which systolic blood pressure is 140 mm Hg. or higher and / or diastolic blood pressure - 90 mm Hg. or higher in persons who don't receive antihypertensive therapy. The term "hypertonic disease" (HD), proposed by GF Lang in 1948, corresponds to the term used in other countries, as the concept of "essential hypertension". The term HD means chronic disease. The main manifestation of it is arterial hypertension which is not associated with the presence of pathological processes which increase blood pressure due to the well-known, in modern conditions causes (symptomatic AH) which are often eliminated. Due to the fact that HD is a heterogeneous disease, which has fairly distinct clinical - pathological variants with significantly different mechanisms in the initial stages of development, the term "arterial hypertension" is often used in the scientific literature instead of the term "hypertonic disease". Despite the efforts of scientists, doctors and public health authorities arterial hypertension in Russia remains one of the most significant medical and social problems. This is due both to the prevalence of the disease (about 40% of the adult population of Russia has elevated blood pressure) and to the fact that arterial hypertension is a major risk factor for the main cardio - vascular diseases: coronary heart disease occurs - 4.5 times more frequently among patients with arterial hypertension, myocardial infarction and stroke (stroke - 9.8 times more often), which mainly determine the high mortality rate in the country. In the West less than 30% of patients are properly controlled. In Russia - only 5.7% of men and 17.5% of women. According to the surveys conducted in the framework of the Federal target program "Prevention and treatment of arterial hypertension in the Russian Federation", the prevalence of arterial hypertension among the population over the past 10 years virtually didn't change and made at 39.5%. Knowledge of hypertensive patients about the presence of the disease rose to 77.9%.

59.4% of hypertensive patients take antihypertensive drugs, 21.5% of them are treated effectively. In the treatment of arterial hypertension diuretics are important, resulting during the long-term use in the decrease of the number of major cardiovascular complications of the disease and increasing life expectancy of the patient.[1] But the development of adverse metabolic and electrolyte disturbances may limit the use of thiazide diuretics group. Indap (indapamid) - indolin hlorsulfonamid derivative is attracting attention as an antihypertensive agent with special properties: minimal diuretic effect and the direct vasodilating effect. The basic of the latter is the inhibition of calcium current in smooth muscle cells of blood vessels? the synthesis of vasodilating prostaglandin - prostacyclin, inhibition of tromboxane A<sub>2</sub> - a prostaglandin with vasoconstrictor properties. These characteristics of the mechanism of action of Indap provide favorable hemodynamic and metabolic profiles: gradually increasing the hypotensive effect, duration of action is more than 24 hours, the low incidence of side effects. It also requires than in patients (especially elderly) the drugs possessed sufficient antihypertensive activity, but did not have a negative effect on glucose and lipid metabolism.

The clinical study showed additional properties of Indap which are very important in the treatment of arterial hypertension: weight reduction of left ventricular hypertrophy and proteinuria, as well as the absence of negative effect on carbohydrate and lipid metabolism, that greatly extends the use of this drug.

### **Material and methods**

Considering relevance of the problem the treatment and prevention of cardiovascular disease, at the end of 2011 in 24 regions of the Russian Federation and Moscow under the auspices of the National Society "Cardiovascular Prevention and Rehabilitation" was launched research, educational and sanitary program in the Russian Federation "PERSPECTIVA" (Prevention of cardiovascular risk in patients with hypertension, ischemic heart disease, atherosclerosis, and hyperlipidemia, heart rhythm disturbances. Reduction of cardiovascular morbidity and mortality in Russian Federation). Currently 382 doctors and 2,000 patients are taking part in the study "PERSPECTIVA" in all of Russia. Objectives: to estimate the effectiveness of therapy indapamide as monotherapy and in combination therapy, improving the efficiency of prophylactic medical examination, optimization of non-drug and drug effects on the pathogenetic factors of the development and course of atherosclerosis, coronary heart disease, arterial hypertension and heart rhythm disorders, the decrease of cardiovascular risk, morbidity and mortality. [2] As a part of the research, educational and sanitary program in the Russian Federation "PERSPECTIVA" (Prevention of cardiovascular risk in patients with hypertension, ischemic heart disease, atherosclerosis, and hyperlipidemia, heart rhythm disturbances. Reduction of cardiovascular morbidity and mortality in Russian Federation), initiated by the National Society, "Cardiovascular Prevention and Rehabilitation" a group of 44 ambulatory patients with AH was organized. The average age of patients was  $58.8 \pm 11.5$  years, among them women - 61.4% (27), men - 38.6% (17). Analysis of the duration of AH showed that 86.4% (38) patients had the length of the disease over 5 years. Most of the patients belonged to the working population - 79.5% (35) persons. By the degree of AH patients were organized as follows: 1st degree - 11.3% (5), 2nd degree - 45.5% (10), 3rd degree - 43.2% (19). The patients were diagnosed the following stages of hypertensive disease: I stage - 0.0%, II stage - 41% (18), III stage - 59% (26). Risk factors of cardiovascular complications: age > 55 years for men and age over 65 years for women - 50% (22), dyslipidemia (general cholesterol levels > 6.5 mmol / L) - 20.5% (9), smoking - 20.5% (9), signs of left ventricular hypertrophy on ECG - 88.6% (39), diabetes mellitus as an associated pathology in 13.6% (6) of patients. 77.3% (34) of patients had overweight, among them overweight (body mass index (BMI) - 25-29.9) was 31.8% (14), obesity of the 1st degree (BMI 30-34.9) - 31.8% (14), obesity of the 2nd degree (BMI 35-39.9) 11.4% (5), obesity of the 3rd degree (BMI > 40) - 2.3% (1). Stratification of risk of cardiovascular complications: low risk - 4.5% (2), medium risk - 2.3% (1), a high risk - 22.7% (10), very high risk - 70.5% (31).[3,4] At the time of first resection, systolic blood pressure (SBP) in 59.1% (26) exceeded 160 mm Hg., diastolic blood pressure (DBP) was 100 and more than

100 mm Hg in 43.2% (19). 88.6% (39) of the surveyed patients were receiving regular antihypertensive combined therapy in accordance with the recommendations of the doctor, the average number of hypotensive drugs was  $2.15 \pm 0.99$  per 1 patient. Of the antihypertensive drugs most commonly used inhibitors of angiotensin-converting enzyme (ACE) - 76.9% (30) were used. In the second place -  $\beta$ -blockers (56.4% (22), diuretics, calcium antagonists, and sartans are used two times less: part in the overall structure of each of them - no more than 30% (13 patients). All patients received Indap 2.5 mg, in combination with ACE inhibitors (56.8% (25), sartans (34.1% (15),  $\beta$ -blockers (72.7% (32), calcium antagonists (40.9% (18). 4.5% (2) patients were receiving monotherapy. [5]

### **Results and discussion**

The results showed that during the 12 months dynamic monitoring most of the patients - 88.6% (39) there was a stable antihypertensive effect was determined, the target blood pressure level was achieved (all data are valid,  $P < 0.05$ ), 72.3% tended to the decrease of body weight, indices of lipid and glucose metabolism were not worsened, there were no side effects. At 11.4% (5) of the patients there was uncomplicated hypertensive crisis against the backdrop of great emotional stress, admission to the hospital was not required. 95.5% (42) of patients and 93.2% (41) of physicians gave high estimation to this therapy (HD). The other cases with a low estimate of treatment both the patient and the doctor were associated with malignant course of hypertension and low continuity of treatment in the patient.

### **Conclusions**

Combined therapy indapamide with the use of the above mentioned antihypertensive drugs achieved the target blood pressure levels in 12 months. Lipid and glucose metabolism against the background of the above mentioned treatment didn't become worse, there were no side effects.

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