

# Use of Lortenza for the Treatment of Arterial Hypertension

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**Received:** 2024, 15, Dec

**Accepted:** 2024, 21, Dec

**Published:** 2025, 08, Jan

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**Annotation:** 22 patients aged 50 to 67 years with arterial hypertension were examined. The patients received complex therapy, including the use of antihypertensive drugs. It was found that the positive dynamics of disease manifestations occurred somewhat faster in patients who were prescribed lortenza than in patients who received antihypertensive drugs of various groups. These data allow us to conclude that the use of the drug Lortenza in patients with arterial hypertension is advisable.

**Keywords:** arterial hypertension, lortenza, antihypertensive drugs, effectiveness.

**Relevance.** According to world statistics, diseases of the cardiovascular system are in first place among all causes of mortality.

Arterial hypertension is one of the most common diseases of the circulatory system, which also acts as a factor in the development of other diseases of the heart and blood vessels, such as coronary heart disease, chronic heart failure, hemorrhagic and ischemic stroke.

Arterial hypertension is a chronic disease accompanied by a persistent increase in blood pressure above acceptable limits (systolic pressure above 139 mm Hg and diastolic pressure above 89 mm Hg). In approximately one in ten hypertensive patients, high blood pressure is caused by damage to an organ. In these cases we talk about secondary or symptomatic hypertension. About 90% of patients suffer from primary or essential hypertension.

Manifestations of hypertension are symptoms of target organ damage (headache, heart pain, shortness of breath, decreased vision, fatigue).

High blood pressure increases the risk of such serious conditions as heart attack, stroke, thromboembolism, heart failure, and renal failure by 5-7 times.

When prescribing treatment, the doctor strives to achieve several goals:

reduce the risk of complications of hypertension (heart attack, stroke, heart and kidney failure), improve the prognosis of the disease, prolong life;

improve the patient's well-being and quality of life.

**Purpose of the study:** To evaluate the effectiveness of the drug Lortenza in the treatment of arterial hypertension.

**Materials and research method:** We examined 22 patients aged from 50 to 67 years with arterial hypertension, who were prescribed Lortenza at a dosage of 5 mg/50 mg as an antihypertensive drug. It was found that faster positive dynamics of disease manifestations occurred when Lortenza was prescribed compared to other antihypertensive drugs. Lortenza is a combination drug that includes amlodipine - 5 mg and losartan potassium 50 mg.

Amlodipine (slow calcium channel blocker) and losartan (angiotensin II receptor antagonist). The main components of the drug have a different mechanism of antihypertensive action: amlodipine causes vasodilation, reducing total peripheral vascular resistance (TPVR), losartan acts on the renin-angiotensin-aldosterone system (RAAS) (inhibits the effects of angiotensin II), which leads to a more pronounced decrease in blood pressure (BP) compared with that during monotherapy with each drug.

Amlodipine, a dihydropyridine derivative, blocks “slow” calcium channels and reduces the transmembrane current of calcium ions into cardiomyocytes and vascular smooth muscle cells. The antihypertensive effect of amlodipine is associated with a direct relaxing effect on arterial smooth muscle. amlodipine had a more pronounced effect on vascular smooth muscle cells compared to cardiomyocytes. Amlodipine has no negative effect on either atrioventricular conduction or myocardial contractility. Reduces renal vascular resistance and increases renal blood flow. After a single oral dose of amlodipine, the effect begins within 2-4 hours and lasts for 24 hours. The maximum antihypertensive effect is achieved no earlier than 4 weeks after the start of therapy. Due to the gradual development of the pharmacodynamic effect, amlodipine does not cause a sharp decrease in blood pressure. Amlodipine reduces the severity of left ventricular hypertrophy. Hemodynamic effects remain unchanged with long-term use of amlodipine.

Losartan is a synthetic ARA II for oral administration. Angiotensin II is a powerful vasoconstrictor, the main active hormone of the RAAS and an important determining pathophysiological link in the development of arterial hypertension (AH). Angiotensin II binds to AT<sub>1</sub> receptors found in many tissues (vascular smooth muscle, adrenal glands, kidneys and heart) and performs important biological functions, including vasoconstriction and aldosterone release. Angiotensin II also stimulates the proliferation of vascular smooth muscle cells. Losartan selectively blocks AT<sub>1</sub> receptors. It does not have agonist properties and does not block receptors of other hormones or ion channels involved in the regulation of cardiovascular activity. Losartan does not inhibit angiotensin-converting enzyme (ACE), which destroys bradykinin. Accordingly, it does not cause an increase in the frequency of undesirable effects associated with the action of bradykinin. After stopping the use of losartan, blood ARP and the concentration of angiotensin II in the blood plasma decrease within 3 days to initial values.

Lortenza blocks receptors for angiotensin II, which is a hormone that causes blood vessels to constrict. Blocking these receptors leads to vasodilation, lowering blood pressure and improving blood flow. Lortenza (losartan) is a drug belonging to the group of angiotensin II receptor blockers. It is widely used for the treatment of arterial hypertension (HTN) and for the prevention of stroke in high-risk patients.

**Results:** It was established that the mechanism of the hypotensive effect of lortenza in patients with essential arterial hypertension is the possibility of improving intrarenal hemodynamics and excretory function of the kidneys with its help. The natriuretic effect found in lortenza also contributes to increasing the effectiveness of antihypertensive therapy. The drug maintains a “decreased clearance of endogenous creatinine. A significant reduction in blood pressure was demonstrated in patients taking lortenza at a dose of 5 mg/50 mg for a long time. The antihypertensive effect of Lortenza may be enhanced when used concomitantly with other antihypertensive drugs.

Lortenza is highly effective in lowering blood pressure. One Lortenza tablet is effective for 24 hours, which allows you to take the drug once a day. Lortenza is generally well tolerated and side effects are rare.

**Conclusions:** Thus, it was found that the drug Lortenza has a good antihypertensive effect, reduces the degree of left ventricular hypertrophy, improves the elasticity of the arteries, and reduces peripheral vascular resistance. Lortenza is an effective drug for the treatment of hypertension. It has a high degree of effectiveness, long-lasting action and a low incidence of side effects.

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