INTERNATIONAL MULTIDISCIPLINARY JOURNAL FOR RESEARCH & DEVELOPMENT
SJIF 2019: 5.222 2020: 5.552 2021: 5.637 2022:5.479 2023:6.563
eISSN 2394-6334 https://www.ijmrd.in/index.php/imjrd Volume 10, issue 12 (2023)

CRITERIAS FOR TREATMENT OF ARTERIAL HYPERTENSION AND CORONARY HEART DISEASES

Isfandiyor Abduraximovich Muminov

Assistant of the department of Inner diseases

Andijan State Medical Institute, Andijan city, Uzbekistan

Email address: epinefrine89@gmail.com

Annotation: The literature review is devoted to the features of the course, the choice of drugs for the treatment ischemic heart disease in combination with arterial hypertension.

Keywords: Ischemic heart disease, arterial hypertension, therapy.

Relevance. The primary goal of treatment is to minimize the overall risk of cardiovascular disease. Morbidity and mortality through the prevention of MI, cerebral stroke and chronic renal failure, regression of organ damage– targets [3, 7]. High blood pressure (BP) is one of the main independent risk factors for the development of atherosclerosis and coronary artery disease, as well as heart failure [5]. The results of the large-scale MRFIT study indicate that systolic and diastolic blood pressure levels are closely correlated with mortality rate from coronary artery disease [2]. At the same time, a decrease in elevated blood pressure leads to a decrease in morbidity and mortality from coronary artery disease [8]. All studies show a high incidence of coronary artery disease in patients with AH [4, 21].

Elevated blood pressure is one of the main damaging factors of the integrity of the endothelial layer of arteries [9]. At present, endothelial dysfunction is considered as the initial stage of atherogenesis [9]. The main goal of treating hypertensive patients is to achieve the maximum reduction in the risk of cardiovascular morbidity and mortality [1, 11].

Modern strategy in patients with coronary artery disease to prevention of cardiovascular complications involves the mandatory prescription of antiplatelet drugs (aspirin / aspirin cardio 75-150 mg or clopidogrel 75 mg), lipid-lowering agents (statins with achievement of the required level of cholesterol low-density lipoproteins - LDL-C) and β-adrenergic blockers in persons who had previously had MI [2]. Attachment of angiotensin-converting enzyme inhibitors - ACE (perindopril 8 mg or Ramipril 10 mg) to all patients with stable CAD, including without signs of heart failure, guarantees reducing the risk of developing MI, which will contribute to significant improvement in prognosis in this category of patients.

The appointment of antiplatelet agents in patients with coronary artery disease in combination with hypertension has its own characteristics. With high uncontrolled hypertension (BP> 180/100 mm Hg), temporary withdrawal of antiplatelet agents is required due to the risk of hemorrhagic strokes. After stabilization of blood pressure at the desired levels, antiplatelet therapy is safe and can be started or resumed [5, 11].

Among lipid-lowering drugs, statins are effective treatments for patients with various forms of coronary artery disease, and upon reaching target level of LDL cholesterol below 2.5 mmol / l or 100 mg/dl [2], and according to the latest data [10, 15], below 2.0 mmol/l or 75 mg/dl, the long-term outcome of the disease is significantly improved. At the same time, it has recently been shown that in patients with hypertension in combination with factors risk and moderate

hypercholesterolemia the addition of statins significantly reduces the risk cardiovascular events [22].

The drugs of choice for hypertension against the background of coronary artery disease are b-blockers and calcium antagonists, since along with antihypertensives, these drug classes they also have anti-ischemic properties [1, 11]. Moreover, several clinical studies and meta-analyses have shown that b-blockers reduce mortality and the risk of recurrent myocardial infarction by 20-25% in patients after myocardial infarction. It should be recalled that b-blockers were among the first antihypertensive drugs, which, according to placebo-controlled studies, have demonstrated a favorable effect on long-term prognosis in patients with hypertension [8]. Used in clinical practice atenolol, metoprolol, bisoprolol, carvedilol and other drugs. However, the feasibility of using a b-blocker such as atenolol in this situation after the recently presented preliminary The results of the ASCOT study have been called into question [4].

Among the drugs that reduce blood pressure, calcium antagonists occupy the leading positions. After graduation studies such as STOP-2 [13], NORDIL [12], INSIGHT [6], ALLHAT [23], INVEST [19], and VALUE [14] evidence was obtained for the complete safety of various representatives of the class of calcium antagonists (nifedipine in a new dosage form - GITS, amlodipine, verapamil, diltiazem) and effectiveness in improved prognosis in patients with hypertension compared with diuretics, b-blockers, ACE inhibitors and angiotensin receptor blockers with good tolerability in terms of metabolic disorders. One of the first well-organized clinical studies to study the efficacy and safety of calcium antagonists in patients with hypertension, was the international study INSIGHT [6]. In it, 6321 In a patient with hypertension and concomitant risk factors for cardiovascular complications, the effect of the calcium antagonist nifedipine GITS and the diuretic coamiloside was studied. Against the background of monotherapy with nifedipine GITS in 70% of cases managed to achieve the target level of blood pressure, which confirms a pronounced BP-lowering effect calcium antagonists.

As noted earlier, b-blockers and calcium antagonists according to modern recommendations are the drugs of choice for treatment of patients with hypertension in combination with coronary artery disease [1, 11]. The INVEST study [19] examined two management strategies patients with hypertension in combination with coronary artery disease - based on antagonists calcium and b-blockers. 22,576 patients with hypertension and coronary artery disease included in the study received either sustained-release verapamil at a dose of 240 mg with science and health care by combining the ACE inhibitor trandolapril and the diuretic hydrochlorothiazide to achieve the target level of blood pressure, or atenolol with the addition of hydrochlorothiazide, and then prescribing, if necessary, trandolapril. On average, after 2.7 years of treatment with the same control of blood pressure, a total of 2269 patients reached the primary endpoint with no significant differences between groups (9.93% in the calcium antagonist group and 10.17% in the b-blocker group; relative risk 0.98; 95% confidence interval 0.90-1.06). Thus, calcium antagonists (sustained release verapamil) are not inferior in terms of effectiveness of b-blockers (atenolol) with treatment of patients with hypertension in combination with coronary artery disease. The recently completed CAMELOT study [17] examined the effect of antihypertensive drugs (amlodipine 10 mg and enalapril 20 mg) and placebo on prognosis. patients with stable coronary artery disease with initially normal blood pressure levels, as well as the progression atherosclerosis of the coronary arteries using intravascular ultrasound. Along with a beneficial effect on prognosis in the calcium antagonist group compared with placebo group, according to the results of intravascular Ultrasound showed no increase in the volume of atheroma of the coronary arteries (p=0.31). At the same time, in patients randomized to a placebo group, there

were significant progression of atherosclerotic lesions compared to baseline ($p<0.001$) and a tendency to progression atherosclerosis in patients on the background of an ACE inhibitor ($p=0.08$). ACE inhibitors. Atherosclerosis, as has recently been shown, is clearly associated with disorders in the renin-angiotensin-aldosterone system [9], therefore, inhibition of ACE activity may become a promising direction in the treatment of coronary artery disease, preventing the production of angiotensin II and increasing the level of bradykinin.

The results of the HOPE and EUROPA studies have proven the feasibility of prescribing ACE inhibitors in established effective dose in patients with atherosclerotic lesions of the coronary arteries (CHD) regardless of the functional state of the left ventricle, despite the lack of positive results in studies such as QUIET [20], PEACE [18], CAMELOT [17].

Treatment of patients suffering from concomitant coronary artery disease and hypertension, requires an integrated approach, that is, the simultaneous impact on both conditions. Main principles of treatment of patients with coronary artery disease in combination with hypertension adequate control of blood pressure levels, the appointment of antiplatelet agents and statins remain. To achieve the target level of blood pressure, they are used as b-blockers (it is necessary to choose metabolically neutral drugs of this class), and calcium antagonists, moreover, the latter demonstrate high efficiency in the combination of coronary artery disease and hypertension; ACE inhibitors are not only allow you to reliably control the level of blood pressure, but also have additional beneficial effects, in addition to lowering blood pressure.

Literature:

1. All-Russian Scientific Society of Cardiology (VNOK). National guidelines for diagnosis and treatment of arterial hypertension. M 2004.

2. Committee of experts of VNOK. Diagnosis and treatment of stable angina pectoris. Russian recommendations. Cardiovascular Therapy and Prevention (Appendix) 2004.

3. Syrkin A.L. Treatment of stable angina pectoris. Consilium medicum. 2000; 2:470-477.

4. ASCOT study investigators, 2005. http://www.ascotstudy.org/home. htm.

5. Armstrong P.W. Stable ischemic syndromes. In: Textbook of cardiovascular medicine. Ed. E.J. Topol. Philadelphia PA: Lippincott Williams & Wilkins-Raven 1998;333- 364.

6. Brown M.J., Palmer C.R., Castaigne A. et al. Morbidity and mortality in patients randomized to double-blind treatment with a long-acting calcium-channel blocker or diuretic in the International Nifedipine GITS study: INSIGHT. Lancet 2000;356:366-372.

7. Chobanian A.V., Bakris G.L., Black H.R., et al. The seventh report of the Joint National Committee on prevention, detection, evaluation and treatment of high pressure: The JNC 7 report. JAMA 2003; 289:2560–2572.

8. Collins R., Peto R., MacMahon S. et al. Blood pressure, stroke, and coronary heart disease. Part 2: Shortterm reductions in blood pressure: Overview of randomised drug trials in their epidemiological context. Lancet 1990;335:827-838.

9. Dzau V., Bernstein K., Celermaier D. et al. The relevance of tissue angiotensin-converting enzyme: manifestations in mechanistic and endpoint data. Am J Cardiol 2001;88:Suppl L:L1-L20.

10. Grundy S.M., Cleeman A., Merz C.N.B. Implications of Recent Clinical Trials for the National Cholesterol Education Program Adult Treatment Panel III Guidelines. Circulation 2004;110:227-239.

11. Guidelines Committee. 2003 European Society of Hypertension - European Society of Cardiology guidelines for the management of arterial hypertension. J Hypertens 2003;21:1011-1053.

12. Hansson L., Hedner T., Lund-Johansen P. et al. Randomised trial of effects of calcium antagonists compared with diuretics and beta-blockers on cardiovascular morbidity and mortality in hypertension: the Nordic Diltiazem (NORDIL) study. Lancet 2000;356:359-365.

13. Hansson L., Lindholm L., Ekbom T. et al. Randomized trial of old and new antihypertensive drugs in elderly patients: cardiovascular morbidity and mortality Trial in Old Patients with Hypertension-2 study. Lancet 1999;354:1751-1756.

14. Julius S., Kjeldsen S. E., Weber M. et al. Outcomes in hypertensive patients at high cardiovascular risk treated with regimens based on valsartan or amlodipin: the VALUE randomized trial. Lancet 2004;363:2021-2031.

15. La Rosa J.C., Grundy S.M., Waters D.D. et al. Intensive lipid lowering with atorvastatin in patients with stable coronary disease. N Engl J Med 2005;352:1425-1435.

16. Neaton J.D., Wentworth D. for the Multiple Risk Factor Intervention Trial Group. Serum cholesterol, blood pressure, cigarette smoking, and death from coronary heart disease: overall findings and differences by age for 316,099 white men. Arch Intern Med 1992;152:56-64.

17. Nissen S.E., Tuscu E.M., Libby P. et al. effect of antihypertensive agents on cardiovascular events in patients with coronary artery disease and normal blood pressure. The CAMELOT study: a randomized controlled trial. JAMA 2004;292:2217-2226.

18. PEACE Trial investigators. Angiotensinconverting-enzyme inhibition in stable coronary artery disease. N Engl J Med 2004;351:2058-2068.

19. Pepine C., Handberg E.M., Cooper-deHoff R.M. et al. A calcium antagonist vs a non-calcium antagonist hypertension treatment strategy for patients with coronary artery disease. The International Verapamil-Trandolapril Study (INVEST): a randomized controlled trial. JAMA 2003;290:2805-2816.

20. Pitt B., O'Neill B., Feldman R. et al. The Quinapril Ischemic Event Trial (QUIET): evaluation of chronic ACE inhibitor therapy in patients with ischemic heart disease and preserved left ventricular function. Am J Cardiol 2001;87:1058-1063.

21. Rosendorff C. Treatment of hypertension patients with ischemic heart disease. In: Hypertension Primer: The essentials of high blood pressure: basic science, population science and clinical management. Eds. J.L.Jr. Izzo, H.R. black. Philadelphia PA: Lippincott Williams & Wilkins 2003;456-459.

22. Sever P.S., Dahlof B., Poulter N.R. et al. for the ASCOT investigators. Prevention of coronary and stroke events with atorvastatin in hypertensive patients who have average or lower-than-average cholesterol concentrations, in the Anglo-Scandinavian Cardiac Outcomes Trial – Lipid Lowering Arm (ASCOT-LLA): a multicentre randomized controlled trial. Lancet 2003;361:1149-1158.