MODERN APPROACHES TO TREATMENT OF ARTERIAL HYPERTENSION IN PATIENTS WITH SUGAR DIABETES AND CORONARY HEART DISEASE

Bocharova H., Yaremenko N., Misiurova S. V.
National University of Pharmacy, Kharkiv, Ukraine
natasha_yaremenko@inbox.ru

Introduction. To date, diabetes mellitus (DM) and arterial hypertension (AH) are two interrelated pathologies, which are the most unfavorable factors in the development of coronary heart disease (CHD), stroke, heart and kidney failure. At the same time, the level of blood pressure (BP) is one of the most important risk factors in the development of CHD. It can occur in people, both elderly and young, often accompanied by concomitant diseases, which are not only complicate the course of the disease, but also its treatment.

Today, DM and AH are two interrelated diseases, which are the most unfavorable risk factors for the development of CHD. About half of people with diabetes have arterial hypertension.

Aim. To study modern approaches for the treatment of arterial hypertension in patients with diabetes mellitus and in patients with CHD, which are presented in the recommendations on arterial hypertension (2013), developed by the European Society of Hypertension (ESH) and the European Cardiology Society (ESC).

Materials and methods. Guidelines ESH/ ESC 2013. meet certain fundamental principles, namely: (I) to summarize the recommendations of adequately performed experiments found thorough literature analysis, (II) the highest priority is given to data from randomized controlled trials (RCTs) and meta-analysis of these studies, and (III) according to the recommendations of the ESC, to indicate class of scientific evidence and recommendations on general issues of diagnosis and treatment.

Investigation of the potential modified risk factors for myocardial infarction in 52 countries (INTERHEART) showed that in the general population about 50% of heart attack risk is due to dyslipidemia, and about 25% is due to hypertension. Several risk factors for CHD, particularly SBP and DBP, are in close contact with body mass index (BMI) which is a fact that underscores the need to prevent the spread of modern sudden increase of obesity in the general population. Results for antihypertensive therapies in RCTs have not showed conclusive evidence that the target SBP in hypertensive patients with clinically manifests of CHD should be of <130 mm Hg. Similarly, there is no conclusive evidence that antihypertensive treatment should start with high normal blood pressure. Recommendations to reduce the level of SBP <140 mm Hg received indirect confirmation during unplanned

protocol analysis of international research of verapamil MB/T and trandolapril (INVEST) results (all patients were suffering from CHD). It showed that the incidence of end points is reversible due to stable control of SBP (<140 mm Hg) during repeated visits to the physician for dynamics monitoring. Regarding what drugs patients with hypertension need, there are conclusive data on a more pronounced preference for beta-blockers (BB) after recent myocardial infarction. In this situation ACE inhibitors are successfully applied. You can then use any antihypertensive agents further. US Joint National Committee (JNC-V11) recommended for the CHD treatment, hypertension accompanied with the evidence-based medicine to take drugs of four groups: diuretics, BB, ACE inhibitors and calcium antagonists (verapamil, diltiazem). In the consensus of American experts, under the combination of two diseases, it is recommended the use of BB and one of the blockers of the renin-angiotensin system (ARB or ACE inhibitors), thiazide diuretic can also be used. If basic therapy is not effective, dihydropyridine calcium antagonists for prolonged exposure are added. ACE necessarily recommended in persons who have had a myocardial infarction.

According to the results of the meta-analysis, all classes of antihypertensive agents can be used to treat hypertension in patients with diabetes, however, the choice of drug for a particular patient should take into account co-morbidities in order to individualize therapy. It is advisable to use combined application. The most preferred are the renin-angiotensin system (RAS) blockers and calcium antagonists, as they potentially improve — or at least not worsen — the sensitivity to insulin. Not less effective is the combination of thiazides, and thiazide-like diuretics or calcium antagonists together with PAC inhibitors. However, the appointment of two blockers (RAS) simultaneously (including the renin-inhibitor — aliskiren) should be avoided.

It should be remembered that beta-blockers and diuretics are only additional drugs and should be prescribed primarily in small doses.

The results and conclusions. Hypertension is one of the strongest factors that influence the occurrence of CHD. There are four groups of drugs that can be taken for treatment of hypertension with concomitant coronary artery disease, calcium antagonists, BB, ACE inhibitors, diuretics. Preference should be given to beta-blockers and calcium antagonists, at least, in the event that the patient has symptoms of angina pectoris. In choosing a rational therapy for the treatment of hypertension in patients with diabetes, it is extremely important to recognize and diagnose both diabetes mellitus and associated hypertension early in order to schedule appropriate treatment and stop the development of severe vascular complications. It is advisable to choose a combined application of antihypertensive drugs for the treatment of this disease, avoiding the occurrence of side effects of concomitant diseases.