

Effects of the lipid lowering therapy on
blood pressure and arterial stiffness in hypertensive patients with ischemic heart disease and type 2
diabetes mellitus

Zhuravlyova L., Lopina N.

Kharkiv National Medical University, Internal Medicine Department № 3, Kharkiv, Ukraine

Objectives: to improve blood pressure (BP) control in hypertensive patients with ischemic heart disease (IHD) disease and type 2 diabetes mellitus (T2DM).

Methods. We examined 42 hypertensive patients with IHD and T2DM (19 males, age $60,5 \pm 4,7$ years). Baseline characteristics of patients included history of arterial hypertension ($12 \pm 2,6$ years), IHD ($7,2 \pm 2,3$ years), T2DM ($4,7 \pm 0,5$ years). The level of HbA1c was less than 7.5%. All patients were divided into 2 groups: the 1st (n = 22) - in the standard therapy received atorvastatin 20 mg, the 2nd (n = 20) - patients with hypertriglyceridemia – received atorvastatin 20 mg and fenofibrate 145 mg. All patients underwent 24-hour ambulatory BP monitoring, determination of lipid profile. Arterial stiffness (AS) was measured as brachial-ankle pulse wave velocity (ba-PWV). These parameters were evaluated at baseline and in 6 months.

Results. Lipid-lowering therapy contributed to decrease levels of LDL (17.3% and 18.1%), triglycerides (28% and 37%), to increase levels of HDL (27% and 31%) in 1st and 2nd groups respectively, resulted in a decrease ba-PWV (from $17,31 \pm 1,54$ to $16,58 \pm 0,97$ m/s vs from $18,8 \pm 1,08$ to $15,8 \pm 0,92$ m/s), significantly reduced 24-h systolic and diastolic BP by 6.4 and 2.6 mmHg in 1st group, 9.3 and 6.1 mmHg in the 2nd group. The largest decline of ba-PWV and significant additional reduction in BP values ($r = 0,39$; $P < 0,05$) was in those patients who achieved target values of lipid profile regardless of BP ($P < 0,05$).

Conclusions. Lipid-lowering therapy improves lipid metabolism, reduces AS and may provide an additional reducing of BP in hypertensive patients with IHD and T2DM.