**Abstract**

**Objective.** To assess the effect of atorvastatin on antioxidant enzyme activities in blood plasma and tissue in

patients with stable coronary artery disease and postinfarction cardiosclerosis.

**Materials and methods.** The study included 122 patients with coronary artery disease (CAD) and 20 healthy controls.

The following blood plasma parameters were assessed by generally accepted measurement tools: lipid

profile, lipid peroxidation (LPO) products — diene conjugates (DC), thiobarbituric acid reaction products (TBARP),

enzymatic antioxidant glutathione peroxidase (GP), erythrocyte superoxide dismutase (SOD), plasma activity

of the antioxidant ceruloplasmin/transferrin system (AOS CP/TF) — by the electron paramagnetic resonance method.

Endothelial function was investigated by ultrasound assessment of endothelial-dependent flow-mediated vasodilation

(EDFMD) by the D. Celermajer et al. method.

**Results.** Patients with stable CAD and dyslipidemia showed the intensification of LPO processes, therefore, DC increased

by 77 %, TBA-RP — by 58 %, and the impairment of enzyme regulation of reactive oxygen species (ROS): the

decrease of AOS CP/TF by 33 %, SOD by 25 % and GP by 39 % compared with the control group. After the prescription

of 20–40 mg of atorvastatin per day for 6 months in combination with complex cardiovascular therapy, the level

of SOD increased by 16 %, GP — by 60 %, the activity of AOS CP/TF — by 12.5 %, the level of DC decreased by 40 %,

TBA-RP — by 32 %, EDFMD improved by 36 %.

**Conclusion.** Atorvastation in combination with complex cardiovascular pharmacotherapy has antioxidant and antiperoxide

activity and improves endothelial function in patients with stable CAD with manifestations of oxidative stress.