Experience of Diabetic Dyslipidemia Correction in Patients with Ischemic Heart Disease and Type 2 Diabetes Mellitus Using α-Lipoic Acid in Combination Therapy
N. Lopina, L.Zhuravlyova
Kharkov National Medical University, Kharkov, Ukraine.

**Purposes:** to investigate the effects of α-lipoic acid (ALA) on diabetic dyslipidemia, endothelial dysfunction, levels of adiponectin and proinflammatory mediators in combination therapy of patients with ischemic heart disease (IHD) and type 2 diabetes mellitus (T2DM).

**Methods.** We examined 40 patients with IHD and T2DM (19 males, age 60.5 ± 4.7 years). Baseline characteristics of patients included history of IHD (7.2 ± 2.3 years), T2DM (4.7 ± 0.5 years). The level of HbA1c was less than 7.5%. All patients were divided into 2 groups: the 1st (n = 20) – received the standard therapy, the 2nd (n = 20) in the standard therapy received ALA 600 mg once daily. In all patients were determined the levels of total cholesterol (TC), low-density lipoprotein cholesterol (LDL), triglycerides (TG), high-density lipoprotein cholesterol (HDL) by enzymatic colorimetric method, proinflammatory mediators (TNF-α, hsCRP), vascular endothelial growth factor (VEGF) and adiponectin by ELISA method at baseline and in 6 months.

**Results.** Using in combination therapy ALA increased plasma levels of HDL on 5% (0.4mmol/L), decreased TC, LDL and TG levels on 4%, 5.2% and 6.3% respectively (all p<0.001), substantially lowered plasma levels of TNF-α by 6±1.5% (P<0.05) and hsCRP from 1.53±0.13 to 0.98±0.11 pg/ml (P<0.05), increased plasma levels of adiponectin by 18±2% (P=0.001) compared with the 1st group. The serum VEGF concentrations in patients who received in the standard therapy ALA were significantly reduced from 320 ± 26 pg/mL at baseline to 212 ±22 pg/mL in 6 months (P=0.022). There were correlations between changes in adiponectin levels and the VEGF concentrations (r=-0.31, P=0.043).

**Conclusions.** Combination therapy with ALA significantly reduced TC, LDL, TG and proinflammatory mediators, VEGF, increased HDL in patients with IHD and T2DM.