

Relationship between intima-media thickness and diabetic dyslipidemia in patients with ischemic heart disease and type 2 diabetes mellitus

Purposes: to investigate relationship between the intima-media thickness of the common carotid artery (CCIMT) and diabetic dyslipidemia in patients with ischemic heart disease (IHD) and type 2 diabetes mellitus (T2DM).

Methods. We examined 60 patients with IHD (25 males, age 60.5 ± 4.7 years). Baseline characteristics of patients included history of IHD (7.2 ± 2.3 years), 30 of them have T2DM (4.7 ± 0.5 years). The level of HbA1c was less than 7.5%. In all patients were determined the levels of total cholesterol (TC), low-density lipoprotein cholesterol (LDL), very LDL (VLDL), triglycerides (TG), high-density lipoprotein cholesterol (HDL) by enzymatic colorimetric method, CCIMT by Carotid Doppler Ultrasonography. All patients received the standard therapy included 20 mg atorvastatin once daily. The control group includes 20 healthy volunteers.

Results. All patients with IHD had significantly higher levels of TC, LDL, VLDL and significantly lower levels of HDL as compare with control group and there were no significant differences between diabetic patients and patients without T2DM. The study found that among patients with T2DM dominated combined dyslipidemia, which was manifested in an additional increase of TG level ($p < 0,05$). CCIMT were significantly higher in diabetic patients with hypertriglyceridemia (hTG) ($p < 0,05$). CCIMT was significantly correlated with age in nondiabetic patients ($r = 0,69$, $p < 0,05$) and diabetic patients ($r = 0,43$, $p < 0,05$). CCIMT was significantly more increased in patients with T2DM and hTG as compare with diabetic patients with normal levels of TG ($p < 0,05$). In patients with T2DM was positive correlation between CCIMT and duration of T2DM ($r = 0,41$, $p < 0,05$).

Conclusions: CCIMT was significantly more increased in diabetic patients with hTG and depend on duration of T2DM.