ARTERIAL STIFFNESS MARKERS IN PATIENTS WITH CORONARY ARTERY DISEASE AND TYPE 2 DIABETES MELLITUS

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Aims: To assess arterial stiffness (AS) markers in patients with coronary artery disease (CAD) and concomitant type 2 diabetes mellitus (T2DM).

Methods. We examined 62 patients with CAD (21 males, age 60.5±4.7 years). All patients were divided into 2 groups: the 1st (n=32) – patients with concomitant T2DM, the 2nd (n=30) - without T2DM. The HbA1c was <7.5%. The control group includes 20 healthy volunteers. In all patients were determined the lipid metabolism. We conducted coronary angiography, ultrasound of the carotid arteries (CA) with determination of intima-media thickness (IMT) of the common carotid artery (CCA), AS was measured as carotid-femoral pulse wave velocity (cf-PWV) on the rheovasography, ankle-brachial index (ABI).

Results. According to coronary angiography among 1st group of patients in 75% cases registered atherosclerotic lesion (AL) of two or more coronary arteries, in the 2nd - at 70% cases registered AL of one coronary arteries (p<0.05). IMT-CCA values were significantly higher in the 1st group compared with the 2nd group (1.34±0.12 vs 1.11±0.11, p<0.05). cf-PWV and ABI value also were higher in the 1st group (9.32±1.54 vs 7.53±0.91 m/s and 1.51±0.08 vs 1.12±0.09 respectively). There were correlations between cf-PWV and IMT-CCA (r=0.41, P=0.043), cf-PWV and ABI (r=0.32, P=0.039), IMT-CCA and ABI (r=0.39, P=0.037). There were registered correlation between cf-PWV and extent of coronary atherosclerosis (r=0.31, P=0.044) and between IMT-CCA and extent of coronary atherosclerosis (r=0.32, P=0.045). IMT-CCA and cf-PWV were higher in diabetic patients with hypertriglyceridemia (p<0.05).
**Conclusion.** Determination of noninvasive indicators of AS, such as cf-PWV, IMT-CCA and ABI, are necessary in the routine clinical practice for the early diagnosis and prevention of vascular complications, including coronary atherosclerosis in patients with T2DM.