**Conection of lipid and carbohydrate exchange violations with the left ventriclar diastolic dysfunction in patients with coronary artery disease and diabetes melitus type 2** Mayorova M.V., Ponomaryova A.V.

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The chronic heart failure (CHF) which is frequently caused by the coronary artery disease (CAD) is an essential medical problem in Ukraine in recent years. The Diabetes melitus (DM) type 2 and CAD are connected by a number of pathogenetic links, among which there is important the strengthening of the left ventricular diastolic dysfunction (DDLV) .

*Purpose:* to define conection of lipid and carbohydrate exchange violations with the left ventriclar diastolic dysfunction in patients with CAD and DM 2 types.

*Materials and methods.* We have examed 60 patients with CAD, in 35 of which the clinical diagnosis of CAD and DM 2 types were established, and in 25 of them - only the diagnosis of CAD. The group of control was made by 17 almost healthy people. To all participants there ware defined DDLV indicators, estimated by means of the data obtained as a result of echocardiographic inspection (Ekho-CG) namely:end-systolic volume (ESV) and end-diastolic volume (EDV). Also to all patients it was executed determination of levels of glycosylated hemoglobin (HbA1c) and glucose of blood serum, also it was measured the level of the general cholesterol (GC), low-density lipoproteins (LDL), very-low-density lipoproteins (VLDL), triglycerides (TG).

*Results.* As a result of the conducted research we defined the reliable increase in ESV and EDV both in group of patients with CAD and DM type 2 and in group of patients with the isolated CAD. In patients with CAD and DM type 2 the EDV was equal 182.74 ± 5.15 ml, in patients only with CAD it was 153.61 ± 5.32 ml and it was 112.4 ± 6.04 ml in almost healthy patients (р <0.05). In group with CAD and DM type 2 patients had ESV 109.12 ± 2.13 ml, in the group with the isolated CAD - 93.84 ± 1.91 ml, in control group - 51.36 ± 1.93 ml (р <0, 05).

*Conclusions.* It is defined that more significant changes happen among EDV indicators. It is expedient to note that the reliable direct correlation between EDV and ESV and existence of DM type 2 was revealed: at a combination of CAD and DM type 2 indicators of EDV and ESV grow more, than at the isolated current of CAD. It is shown that growth of ESV and EDV directly correlates with increase of GH, LDL, VLDL, TG, and the HbA1c and glucose levels. It demonstrates the prevalence of the left ventriclar diastolic dysfunction over the left ventriclar systolic dysfunction int patients with CAD and DM type 2.