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**THE CHANGES OF CARBOHYDRATE EXCHANGE PARAMETERS IN**

**DIFFERENT TYPES OF DYSLIPIDEMIA IN PATIENTS WITH**

**CORONARY HEART DISEASE AND DIABETES MELLITUS TYPE 2**

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**Introduction.** Coronary heart disease (CHD) is ranked first in the structure of morbidity and

mortality in economically developed countries. According to World Health Organization (WHO)

statistics, more than 16 million people die of cardiovascular diseases (CVD) every year. The

prevalence of CVD increases due to aging of the population, and lifestyle changings. In recent

decades our civilization is threatened by another disease, which takes an increasingly ‘epidemic’

outline, - diabetes mellitus (DM). Despite of the successful diagnosis, treatment and prophylaxis of

coronary artery disease combined course in patients with concomitant diabetes mellitus type 2, the

pathogenetic links of such patients’ metabolic disorders are still unclear. Our aim is to evaluate

changes in carbohydrate metabolism rates, depending on the types of dyslipidemia in patients with

coronary heart disease and diabetes mellitus type 2.

**Materials and methods.** A comprehensive examination of 75 patients with CHD and diabetes

mellitus type 2 who were treated in the cardiology Department of Kharkiv city clinical hospital № 27

as a basic medical institution of the Department of internal medicine № 2 and clinical immunology

and allergology of Kharkiv National Medical UniversityMOH was provided. The average age of the

patients was 65.16 ± 1.53 years. Determination of the content of glycated hemoglobin (HbA1c) in the

whole blood was carried out by photometric method in reaction with thiobarbituric acid using the

commercial test systems of the company ‘Reagent’ (Ukraine) according to the instructions. The level

of insulin in serum was determined by enzyme-linked immunosorbent assay using the ELISA kit

(USA). Depending on the types of dyslipidemia, all patients were divided into 3 groups: the first

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group included patients with dyslipidemia type II a (n = 30), the second group included people with

dyslipidemia type II b (n = 24), the third group included patients with dyslipidemia type IV (n = 21).

Types of dyslipidemia were determined using the hyperlipidemia classification by WHO, based on

the classification by Fredrickson (D. Fredrickson).

**Results.** As a result of the study, it was found that the level of insulin in patients of the first group

was 23.5% and 19.8% (p <0.05) higher than that of the second and third groups’ patients while

glycosylated hemoglobin content was 18.5% and 16.4% (p <0.05) higher. Other indicators of

carbohydrate metabolism in patients with coronary heart disease and diabetes mellitus type 2 have

shown no reliable difference (p <0.05).

**Conclusion.** Thus, the obtained results indicate the changes in carbohydrate metabolism parameters

in patients with all types of dyslipidemia. More significant changes were found in patients with

dyslipidemia type IIa, which may indicate a negative effect of this type of dyslipidemia on

carbohydrate metabolism in patients with coronary heart disease and diabetes mellitus type 2.