Features of carbohydrate exchange in patients with coronary artery disease in the presence of accompanying diabetes melitus type 2

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Relevance: the diabetes mellitus (DM) is one of the leading medico-social problems of modern society that is caused by its high incidence and prevalence, frequent emergence of chronic micro- and makrovessel complications. Also DM is an important factor of risk of the coronary artery disease (CAD). CAD in patients with DM type 2 meets in 2-4 times more often than among people of the same age without diabetes mellitus. The main reason for an invalidization and mortality in patients with DM are cardiovascular diseases in which development the leading value has CAD. It is necessary to notice that 3 of 4 patients with DM die of the reasons connected with atherosclerosis and in most cases (75%) – of CAD. Considering DM type 2 associations with changes of the carbohydrate profile, that is lead to increase in frequency of emergence of cardiovascular complications in patients with CAD, studying of features of carbohydrate exchange in patients with CAD in the presence of the accompanying DM type 2 was expedient.

Work purpose – to define features of carbohydrate exchange in patients with coronary artery disease in the presence of the accompanying diabetes mellitus type 2.

Materials and methods: we conducted comprehensive examination of 110 patients with CAD. Patients were distributed on groups depending on existence of DM type 2: to the first group 75 patients with CAD and DM type 2 entered, the group of comparison was made by 35 patients with CAD without diabetes mellitus. 25 almost healthy faces entered to the control group. For all patients there were conducted clinical examination for the purpose of carbohydrate exchange control: determination of glucose level on an empty stomach, insulin on an empty stomach, glucose haemoglobin and НОМА index.

Results: in group of patients with CAD in combination with DM type 2 glucose level on an empty stomach was 7.19±0.31 mmol/l, and in group of patients with CAD without diabetes – 4.37±0.08 mmol/l (r <0.05). Insulin level on an empty stomach was 27.16±0.48 mkOd/ml in patients of the first group and insulin level on an empty stomach in patients of the second – 8.32±0.21 mkOd/ml was authentically higher (r <0.05). In the first group great values of level of glucose haemoglobin, than in the second group – 10.42±0.28% and 4.68±0.25% respectively were noted (r <0.05). When determining the HOMA index data about its reliable increase in patients of the first group (8.87±0.71) in comparison with the second group were obtained (1.67±0.25) (r <0.05).

Conclusions: metabolic violations of a carbohydrate profile in patients with coronary artery disease and diabetes mellitus type 2 are shown by a hyperinsulinemiya, a hyperglycemia and increase in degree of insulin resistance.