

The aim of the study was to investigate the frequency of hyporesponse to statin therapy among patients with impaired carbohydrate metabolism after acute coronary syndrome (ACS) in short-term follow-up.

Methods. A retrospective analysis of the medical records of 1500 patients admitted for cardiologic follow-up after ACS was performed. The data of patients who did not receive statins before the development of ACS (400 patients; mean age — 63.42 ± 9.64 years, including 286 (71.5%) men) were included in the analysis. Carbohydrate metabolism disorders (CMD) according to WHO and Russian Association of Endocrinologists criteria were present in 124 patients (type 2 diabetes mellitus (type 2 DM) — in 71 patients; prediabetes — in 53 patients). All patients were prescribed high-dose statin therapy, namely atorvastatin (40 mg or more daily). Low-density lipoprotein (LDL) cholesterol was assessed at baseline and after 1 month of therapy. Hyporesponse to statins was defined as the percentage reduction in LDL cholesterol of $<15\%$ from baseline during 1 month of therapy. Suboptimal response was defined as an LDL reduction of less than 50% after 1 month of therapy.

Results. The frequency of hyporesponse was 26.75% ($n=107$). Depending on the history of carbohydrate metabolism disorders (type 2 DM, prediabetes), patients were divided into 2 groups: group 1 (CMD, $n=124$), group 2 (without CMD, $n=276$). After 1 month of follow-up in the total group, the rate of hyporesponse was 26.75%. In group 1 and group 2, the rate of hyporesponse to statin therapy was 25.81% and 27.54%, respectively ($p=0.719$). The frequency of suboptimal response in the CMD group was 56.45%. Patients with CMD and hyporesponse to statins were characterized by lower baseline LDL levels.

Conclusion. The absolute majority of patients with CMD after ACS do not achieve the LDL-lowering goal after 1 month of high-intensity statin therapy. Hyporesponse to statins is seen in a quarter of this group. Lower baseline LDL levels increase the likelihood of hyporesponse to statins.