

EFFECTIVENESS OF CORRECTION OF DYSLIPIDEMIA IN ELDERLY PATIENTS WITH TYPE 2 DIABETES MELLITUS

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Relevance. Dyslipidemia is an established risk factor (RF) for cardiovascular disease (CVD) and can be defined as elevated serum levels of total cholesterol (TC), low-density lipoprotein cholesterol (LDL-C), triglycerides (TG), or decreased concentrations of high-density lipoprotein cholesterol. density (HDL cholesterol) in serum [1, 2,]. These plasma lipid abnormalities may be primary, resulting from the interaction of genetic predisposition and environmental risk factors, or secondary, resulting from other diseases (eg, diabetes, hypothyroidism, and nephrotic syndrome) [3, 4]. LDL cholesterol is considered the main modifiable risk factor for the incidence of revascularization, ischemic stroke, atherothrombotic process, and death from CVD [5–7]. The importance of the role of LDL cholesterol is supported by numerous studies, including clinical trials of proprotein convertase subtilisin/kexin 9 (PCSK9) inhibitors, which increase the expression of the LDL cholesterol receptor on hepatocytes, as well as the clearance of LDL cholesterol by the liver [8, 9]. It is known that elevated levels of cholesterol (C) (hypercholesterolemia), especially LDL-C, promote the process of atherosclerosis, leading to the deposition of cholesterol and fatty acids on the arterial

wall, while HDL-C is generally considered a protective factor¹. However, while De Freitas E. et al reported that low HDL-C levels are a risk factor for CVD in older adults [10], a systematic review and meta-analysis by Briel M. et al. showed that elevated HDL-C levels was not associated with a reduction in CVD risk or mortality [11]. The National Health and Nutrition Examination Survey (NHANES) reported from 2003 to 2006. it is indicated that 53% (105.3 million) of adults in the United States have at least one lipid disorder: 27% (53.5 million) have high LDL cholesterol levels, 23% (46.4 million) have low HDL cholesterol levels, and 30% (58.9 million) had high TG levels. In addition, 21% (42.0 million) of adults in the United States have mixed dyslipidemia, defined as the presence of high LDL-C levels in combination with at least one other lipid disorder [12]. Results of the relationship between the risk of CVD and their complications with dyslipidemia should take into account various factors that may determine the intensity of the development of the atherosclerotic process, which may determine the possibility of using drugs with cardio- and vasoprotective capabilities. Cromwell W. et al. adjusted their data for age, gender, SBP, smoking and lipid-lowering medications [13], and Van den Berg M. et al. adjusted for age, gender, BMI, smoking, alcohol consumption, diabetes mellitus and lipid-lowering medications [14]. A number of studies have found that elevated TG levels increase the risk of CVD in men to a greater extent than in women, although the role of TG in the pathogenesis of cardiovascular pathology and the formation of atheromas is still unclear. Nevertheless,

Purpose of the study: to evaluate the effectiveness of medication in the correction of atherogenic dyslipidemia in the elderly patients with type 2 diabetes mellitus and high cardiovascular risk.

MATERIAL AND METHODS

A study was conducted of 180 case histories of patients with type 2 diabetes mellitus, observed for 5 years in the therapeutic department of the State Budgetary Healthcare Institution "City Clinical Hospital No. 3" (Nizhny Novgorod Geriatric Center). The average age of the patients was 71.5 ± 8.9 years, the average duration of the disease was 16 ± 7.8 years. The selection of patients was carried out using random sampling. The inclusion criterion was the presence of cardiovascular pathology. Exclusion criteria were the presence of cancer, senile dementia, severe liver and kidney damage. All patients were examined for total cholesterol (TC), low-density lipoprotein cholesterol (LDL-C), triglycerides (TG), glycated hemoglobin (HB), and serum creatinine. blood (with calculation of glomerular filtration rate), liver tests, general urine test and urine test for microalbuminuria, ECG, blood pressure level, body mass index. The degree of cardiovascular risk was assessed for each patient. The effectiveness and safety of prescribing statins in elderly patients was studied. Lipid-lowering therapy was considered effective if the patient's target lipid levels were

detected during the study in accordance with the recommendations (LDL < 2.5 mmol/l).

Study results: in the study group, 99.7% of patients had a high vascular risk, but only 20.4% of them took the recommended lipid-lowering drug therapy. Of these, 24.4% had taken statins for less than 1 year, 75.6% had taken statins for more than a year, and only 13.4% had taken statins for 2 years. In 88.9% of cases, statin therapy was discontinued on its own, in 12.5% due to an increase in liver enzymes. Achievement of the target level of all 3 indicators of the lipid spectrum was stated only in 1.7% (in 2 patients). In general, in the group of patients, TC exceeded the target level in 104 patients (57.7%), TG - in 129 (71.6%) and LDL cholesterol - in 165 patients (91.6%). Achievement of target LDL levels was noted in 25 patients (22.1%).

Conclusion: There is an underestimation of the importance of correcting dyslipidemia in patients with type 2 diabetes mellitus in the older age group. Low effectiveness of lipid-lowering therapy was revealed in the examined patients, which was probably due to insufficient doses of prescribed statins.

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