Abstract: P1685

Effects of statins on major adverse cardiovascular events in patients with ischemic chronic heart failure with reduced ejection fraction and renal dysfunction

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The aim of the study to investigate the effect of different doses of statins on long-term prognosis in patients with ischemic chronic heart failure (CHF) with reduced ejection fraction (EF) and renal dysfunction (RD).

Materials and methods. The study involved 140 patients (114 (81.4 %) men) with ischemic CHF, mean age 60 [54-68] years. 2 functional class (FC) of chronic heart failure was diagnosed in 27 (19.3 %) patients, 3 FC - in 98 (70 %) patients. Prior myocardial infarction was in 106 (75.7 %) patients. The glomerular filtration rate (eGFR) was calculated using the formula MDRD (Modification of Diet in Renal Disease). Mean GFR was 70.2±15.5 ml/min/1.73cm², mean ejection fraction 34.7±7.2 %. Therapy included: ACE inhibitors/ARBs (90 %), beta blockers (94.3 %), diuretics (87.8 %), antagonists mineralocorticoid receptor (75 %), antiplatelet agents (70.7 %), calcium antagonists (14.3 %), amiodarone (18.6 %), ivabradine (15 %). Statins received 118 (84.3 %) patients in doses that meet mild and moderate intensity lowering low-density lipoprotein cholesterol (mean dose of atorvastatin amounted to 21.9 mg, rosuvastatin - 12.9 mg). The period of follow-up was 3 years. As clinical endpoints were considered all fatal and non-fatal atherothrombotic events, including re-infarction, ischemic stroke, sudden cardiac death, heart failure and all cases of hospitalization due to this reason, registered within 3 years after signing informed consent. The cumulative survival curves were constructed with the use of the Kaplan-Meier method and groups were compared with the log-rank test.

Results. Analysis of the observations showed that adverse cardiovascular events during the observation period occurred in 92 (65.7 %) patients, among them - the fatal re-infarction in 8 (8.7 %), sudden cardiac death in 25 (27.2 %) patients, 53 patients (57.6 %) was hospitalized due to HF decompensation, 4 patients (4.3 %) reported non-fatal re-infarction, 2 (2.2 %) patients non-fatal stroke. Found that inclusion statins in the standard pharmacological therapy of ischemic CHF patients with reduced EF and RD reduces the risk of a cumulative endpoint by 51% (HR 0.49; 95 % CI 0.26-0.91; p=0.02), mainly due to reduction of episodes of hospitalization due to decompensation of HF (HR 0.32; 95 % CI 0.14-0.72; ?<0.01). The positive effect was independent of the intensity statin therapy (HR 0.96; 95 % CI 0.52-1.78; p=0.91), but among the statins atorvastatin had the advantage (HR 0.37; 95 % CI 0.21-0.69; ?<0.001).

Conclusions. The inclusion of statins in the standard pharmacological therapy of patients with ischemic CHF with reduced left ventricular EF and renal dysfunction significantly reduces the risk of cumulative endpoint, mainly due to the prevention of hospitalizations regarding decompensation of HF. Regimen of administration of statins (mild and moderate intensity) did not significantly affect the risk of cardiovascular events.