**Abstract**

**Objective.** To assess the effectiveness of the early prescription of trimetazidine in patients with acute coronary syndrome (ACS) and established multivessel coronary artery disease syndrome after incomplete myocardial revascularization.

**Materials and methods.** This open-label randomized study included 100 patients with multivessel coronary artery disease syndrome. The randomization was blind into two equal groups: the study group (received 70 mg/day trimetazidine during the entire observation period) and the control group (did not receive trimetazidine). Echocardiography (EchoCG) was performed according to generally accepted technique on the ACUSON 128 XP 10 apparatus (USA) with the study of the following characteristics: left atrium and right ventricle anterior-posterior diameter, end-systolic and end-diastolic diameter of the left ventricle (LV), interventricular septal thickness, left ventricular (LV) posterior wall thickness, end-systolic and end-diastolic volumes, as well as LV ejection fraction (EF) according to the Simpson method.

**Results.** According to the results of EchoCG, mean LV EF was 50.72±6.89% in the modified-release trimetazidine (trimetazidine- MR) group and 52.69± 7.5% in the comparison group. In addition, significant changes in the Echo CG linear dimensions were diagnosed, and in 100% of cases there were LV diastolic dysfunction of varying severity. Patients with ACS with early prescription of trimetazidine, required significantly fewer repeat myocardial revascularizations. According to statistical analysis, the Kaplan— Meier curves significantly diverged at the 12th month of study. Thus, the survival coefficient in actively treated patients was 0.72, and 0.54— in the control group, the differences between groups were 18% in favor of the trimetazidine-MR use.

**Conclusion.** Early prescription of trimetazidine-MR in patients with ACS and incomplete myocardial revascularization is associated with the decrease of cardiovascular complications during the first year of treatment, which should be considered as an important component of rehabilitation after endovascular intervention.

**Keywords:** trimetazidine-MR, acute coronary syndrome, incomplete myocardial revascularization.