

## THE INFLUENCE OF EXERCISE TRAINING ON QT DISPERSION AND RISK FACTORS FOR CARDIOVASCULAR DISEASES IN PATIENTS AFTER CORONARY ARTERY BYPASS GRAFT SURGERY

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The aim of this study was to determine the impact of exercise training on QT dispersion and risk factors for cardiovascular disease in patients after coronary artery bypass graft surgery (CABG).

143 patients after CABG, in a sinus rhythm, without atrioventricular or branch blocks, average age 57.5 years, were involved in the study. Patients were randomly divided into the exercise training group (TG: 107 patients) and non-training group (NTG: 36 patients). In addition to clinical examination and laboratory analysis, all the subjects had standard ECGs out of which, QTd was calculated and QT dispersion (QTdc) was corrected. The patients performed the exercise test according to Bruce's protocol, after that the participants of the training group were involved in the exercise training. According to the results of the exercise test, the TG of patients was subjected to a certain degree of physical activity (gymnastic exercises, using the bicycle ergometer and walking). During the follow-up period, medication therapy was not changed. After the observed follow-up period of 21 days, the standard ECG and the exercise test were performed, once again.

In TG of patients, after treatment with exercise training, there was a significant reduction in QTd and QTdc ( $p < 0.005$  for both parameters). In TG of patients, after 3 weeks, there was a significant reduction in systolic and diastolic blood pressure, heart rate, double product, total and LDL cholesterol ( $p < 0.001$  for all parameters). TG of patients, who were on the second exercise test, achieved significantly longer time, while the non-training group showed no significant changes.

The study showed that exercise training has favourable effects on QT dispersion in patients after CABG. Exercise training led to significant reduction in blood pressure, heart rate, double product, cholesterol, as well as significantly improved physical exercise capacity, which has a beneficial effect on the prognosis in these patients.

*Acta Medica Medianae 2018;57(4):29-35.*

**Key words:** exercise training, coronary artery bypass graft surgery, QT dispersion, risk factors for cardiovascular disease