

RESTORATION OF THE HEART RATE VARIABILITY IN RELATION TO THE CARDIAC REHABILITATION 2 YEARS PROGRAM

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The goal of this study was to analyze restoration of heart rate variability in relation to the efficacy of cardiac rehabilitation program (CRP) for post-MI pts during 2 years follow-up period.

Method and contingent. We investigated 170 pts after MI (age 59,6 yrs), who was taking part in 2 years CRP program. The program consists (after patients indoctrination): the calisthenics, home walking unsupervised program (individual intensity and duration), and counselling related with the lifestyle changes, risk factors control and taking of prescribed drugs (ACE inhibitors, β -blockers, nitrates, aspirin, statines). Computerized analysis efficiency of individual CRP and dynamics the symptoms of cardiac pathology (ECG, echocardiography, bicycle ergometry), risk stratification, psychoemotional status, cardiac risk factors and physical capacity and values of HR variability were monitored during follow-up periods (6, 12, 18, 24 months) and compared with these components during early rehabilitation period.

Results. The significant positive dynamic of improved functional state (FS) during 1-year rehabilitation follow-up period was determined in post-MI pts, as compared with early rehabilitation period. During 1,5-2 years period FS become worse. In post-MI patients with inexpressive symptoms of coronary insufficiency (CI) and heart failure (HF) constant improvement of their FS during 2 years period was found. Dynamic recovery of autonomic heart rate control and hemodynamic were depended on dominating components of cardiovascular status. Besides, efficacy of the CRP for post-MI pts satisfactory improved during 1 years period in parallel with restoration of sympathetic and parasympathetic HR control and become worsen during 1,5-2 years period, especially in post-MI pts with expressed symptoms of CI and HF. In cases of poorer cardiovascular state – earlier, unfavourable remodelling of autonomic heart rate control (after 6 mo) was determined. Predominance of humoral HR control in relation with worsening efficacy of rehabilitation during 2 year period was found.

Conclusion. In post myocardial infarction patients functional status and efficacy of cardiac rehabilitation program was improved until 1 year's period in parallel with positive restoration of sympathetic and parasympathetic HR control. Dynamic recovery of autonomic heart rate control and hemodynamic were depended on the components dominating in cardiovascular status.