

The Relationship between Cardiovascular Endurance, Body Mass Index and Quality of Life of the Post-Myocardial Infarction Patients in the Cardiology Clinic at University Hospital Kotelawala Defence University (UHKDU)

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Since myocardial infarction (MI) is a critical public health threat in modern times, this study was conducted to investigate the relationship and improvement of cardiovascular endurance (CVE), body mass index (BMI) and health related quality of life (HRQOL) in post-MI patients, who have not undergone a cardiac rehabilitation (CR) program. Seventy non-ST-elevated myocardial infarction (NSTEMI) patients participated in this longitudinal study. CVE, HRQOL and BMI were obtained using 6 minute walk test (6MWT), a short form 36 questionnaire (SF-36), and BMI formula using stadiometer measurements. Patients were assessed twice, initially and after 2 months. According to the Pearson correlation coefficient and the ANOVA test, no significant correlations were observed between CVE and HRQOL (in initial and after 2 months assessments), CVE and BMI, and BMI and HRQOL ($p > 0.05$). A statistically significant positive correlation was observed between the physical component summary (PCS) and mental component summary (MCS) of HRQOL ($p = 0.0001$, $r = 0.691$). Paired sample t test indicated no significant differences in means of CVE and HRQOL, whilst, neither age nor gender had a significant influence according to an independent sample t test. The findings deviate from the previous studies conducted with a CR program. The participants did not exhibit significant improvements of CVE and HRQOL, or significant correlations between CVE, BMI and HRQOL. No significant differences of CVE and HRQOL were identified when stratified by age and gender. A statistically significant positive correlation was observed between PCS and MCS of HRQOL. Since neither the CVE nor HRQOL have been improved without a CR program, future studies should be directed to examine this relationship after a CR program.

Keywords: *myocardial infarction, cardiovascular endurance, body mass index, health related quality of life*