Abstract: Abstract
Objectives: Supervised exercise cardiac rehabilitation programs have been suggested to all patients specially patients with post myocardial infarction (MI) for many years. However, limited information is available on the usefulness of exercise rehabilitation programs in chronic MI. the aim of this study was to evaluate the outcome of supervised exercise training on mi patients by measuring both physical and physiological factors.
Methods: This was a semi-experimental randomized study. It included seventy tow (35 cases, 37 controls) post-MI patients age 40 to 67 years. They were randomly selected from those with MI based on WHO criteria that were referred to cardiac rehabilitation unit of Isfahan shahid chamran cardiovascular research center. After initial measurements including weight, height, functional capacity, diastolic blood pressure (DBP) and systolic blood pressure (SBP) in both resting and exercise states, patients were randomized into either training group (n=35) or the control group (n=37). The training group had supervised aerobic training program, three times a week, with 60-70% of the maximal heart rate (HR) reserve for two months. After the training program was completed, all measurements were repeated in both groups. Data were analyzed using one-way analysis of variance (ANOVA) with repeated measures.
Results: Patients in exercise group showed statistically significant improvement in resting HR (81.27±7.75 bpm vs. 74.17±10.11 bpm, p≤0.001), resting SBP (125.92±9.30 mmHg vs. 123.54±6.82 mmHg, p≤ 0.01), SBP peak (150.22±7.12 mmHg vs. 133.54±6.82 mmHg, p≤ 0.001), HR peak (132.51±3.06 bpm vs. 142.00±3.14 bpm, p≤0.001), and exercise capacity (8.49±1.18 METs vs. 9.42±1.19 METs, p≤0.001).
Conclusions: The results from the study showed that a 2-months exercise rehabilitation program in post-MI patients is useful for improving both blood pressure and exercise capacity and should be encouraged more commonly.
Keywords: Myocardial infarction; Exercise cardiac rehabilitation; Blood pressure; Functional capacity.