Comparative analysis of cardiopulmonary responses of healthy sedentary men and men after acute myocardial infarction #73

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The aim of this study was to assess the aerobic capacity of men after acute myocardial infarction (G-AMI) and of healthy sedentary men (G-C) at the anaerobic threshold (AT) and at the peak of the exercise (up to physical exhaustion) during a ramp-type ergospirometric test (R-ET). Methods: 22 volunteers divided into two groups: G-AMI (n=10), 55.6 ± 9.7 years old, undergoing β-blocking therapy (atenolol, dosage 46 ± 9.4 mg/day), Killip classification grade I, and G-C (n=12), 53.3 ± 3.2 years old. The G-C subjects took no type of medication. Experimental protocol: R-ET, with power increments of 10W/min for the G-AMI and of 15W/min for the G-C. The evaluated variables were: heart rate (HR), ventilatory and metabolic, recorded breath-by-breath using an ergospirometer (CPX/D MedGrafics – Breeze, St. Paul, Minnesota, USA). Statistical Analysis: Mann-Whitney tests $\alpha = 5\%$. The power, cardiovascular, ventilatory and metabolic variables obtained from the R-ET at the peak of the exercise, for G-AMI and G-C, presented a statistically significant difference ($p<0.05$), showing higher values for G-C, except the VO_2 in L/min. However, the variables showed similar values at the AT ($p>0.05$). Conclusion: The lower aerobic capacity at the peak of the exercise can be attributed to the use of β-blocking therapy and to prolonged bed rest.

Key words: acute myocardial infarction; heart rate; men.