
Heart

4.7 The After Exercise Recovery in Hypertensives with or without Left Ventricular Hypertrophy

G. Ratti,¹ C. Elefrico,² G. Covino,¹ P. Tammaro,¹ C. Tedeschi,² C. Fulgione,²
P. Lucca,¹ M. Volpicelli,¹ G. Ricciardi,² D. Buono,¹ F. Borrelli,² P. Capogrosso¹
(1) UO di Cardiologia/UTIC, PO S. Giovanni Bosco, ASL Napoli 1, Na Naples; (2)
UO di Cardiologia, PO S. Gennaro, ASL Napoli 1, Naples, It Italy

Introduction: An altered recovery after exercise in the values of systolic arterial pressure (PAS) or of cardiac frequency (FC) in hypertensive subjects, has been observed is correlated to a greater cardiovascular risk.

Aim: To appraise the recovery after exercise to the ergometric exercise testing (RpE) in hypertensives with increased additional risk for the presence of left ventricular hypertrophy (LVH).

Methods: 97 Caucasian patients, with arterial hypertension I-II stage ESH-ESC have been studied (66 man and 31 woman, mean age 55 ± 13 years) and with body mass index (BMI) 27, 6 kg/mq. The following exclusion criteria have been considered: known coronary artery disease, endocrinopathies (including diabetes mellitus). All patients had the same lifestyle and have no previous treatment. All give previous consent to participate in the study, has been submitted to a complete physical examination, electrocardiogram in the 12 standard derivations, echocardiographic exam with calculation of left ventricular mass index (LVMI)(hypertrophic values >125 g/m²) and ergometric exercise testing to the treadmill according to the Bruce protocol. After the echocardiogram, the patients were separated into 2 groups: A group with LVH (49 pts) and B group without LVH (48 pts). Among the two groups the values of RpE were compared. RpE were expressed as ratio among double product to II minute of recovery (DPR) and to the peak (DPA) (DPR/DPA). Patients were also compared for age, LVMI and BMI.

All values were expressed as mean \pm DS; statistic analysis was conducted with the Student t test for paired data, a value of $p < 0,05$ was considered statistically significant.

Results: Among A groups and B group there were statistically significant differences in the values of DPR/DPA (A group = 0.58 ± 0.25 versus B group = 0.44 ± 0.26 , $p < 0,05$).

Conclusions: Our results underline a significant difference in values of DPR/DPA between A group and B group. The latter, in our study, is characterized by target organ damage. It is possible therefore to infer that an altered recovery after exercise in hypertrophic hypertensives, is referable to an altered equilibrium among the system nervous autonomous activity, also responsible for left ventricular hypertrophy.