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Title: Cardiac autonomic responses exercise-induced during inpatient cardiac rehabilitation in patients undergoing CABG and left ventricular function different

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Body: Introduction: Patients undergoing coronary artery bypass graft (CABG) with reduced left ventricular function (LVF) are those who experience greater cardiac autonomic adaptation at rest after inpatient cardiac rehabilitation (CR). However, the acute cardiac autonomic response (CAR) during exercise remains to be investigated. Aim: To assess whether physical exercises can evoke beneficial CAR in post-CABG patients with different LVF. Method: Forty-four patients, divided into LVF normal (LVFN, n=23) composed of patients with left ventricular ejection fraction (LVEF)≥ 55% and LVF reduced group (LVFR, n=21) with LVEF = 35–54% were evaluated. CAR was assessed by heart rate variability (HRV) during extremity ROM exercises and ambulation on the first postoperative day (PO1) and before discharge, respectively. Results: PO1 were observed significant intragroup differences for mean heartbeats intervals and heart rate to rest and exercise in both groups. During ambulation were found lower values of HRV (STDRR, TINN, SD2, shannon entropy and correlation dimension) to LVFR as well as for the change between rest and ambulation for the total HRV indices (STDRR, RRtri, TINN and SD2), parasympathetic activity (rMSSD) and complexity of the data (correlation dimension) ($P < 0.05$). Conclusion: In patients with normal LVF, physical exercise triggered more attenuate CAR compared with patients with reduced LVF post-CABG. Thus, prescribed intensities of physical exercises at this time should be reviewed considering the differences of ventricular function of patients involved. Support: PNPD /Capes 23038.008208/2010-25, FAPESP 2009/54194-5.