

Cardiac rehabilitation as a viable option in borderline coronary obstruction

Jackeline Barbosa Moreira¹, Maria Lúcia da Silva², Daniela Santos de Jesus³, Jefferson Petto⁴

1. Exercise Cardiology Center – Hospital Córdio Pulmonar – Salvador (BA), Brazil

2. Faculdade do Centro Oeste Paulista – Bauru (SP), Brazil

3. Bahiana School of Medicine and Public Health – Salvador (BA), Brazil

4. Actus Cordios, Cardiovascular and Metabolic Rehabilitation – Salvador (BA), Brazil

Introduction: In cases of chronic Coronary Artery Disease (CAD) with borderline obstructions, surgery is usually the primary option. However, an alternative before surgery is conservative treatment, which consists of pharmacological treatment associated with Cardiovascular Rehabilitation (CR). The cost-benefit of conservative treatment is higher than the surgical procedure. However, it is still little explored in the literature in this situation of borderline CAD. **Case description:** Male, 52 years old, sedentary, former smoker for 12 years, with a clinical diagnosis of CAD (64% obstruction of the circumflex and anterior descending arteries), arrhythmia, systemic arterial hypertension and dyslipidemia. He entered the CR service in August 2017 with complaints of shortness of breath, fatigue, difficulty going up and down stairs, limitations in carrying out daily and work activities, in addition to limited sexual activity. The CR program consisted of remote ischemic preconditioning, inspiratory muscle training, neuromuscular and cyclic exercises, and stair training. All exercises were performed with electrocardiographic monitoring. The exercise progression was carried out from the first, third and fifth months, with a total duration of six months. In response to the CR program, there was normalization of blood pressure (mmHg) 140/90 vs 110/70, improvement in cardiovascular fitness characterized by the progression of training on the treadmill (km/h) 3.5 vs 14 and in the maximum physical effort test which reached the following pre and post CR values: distance (meters) 550 vs 730, VO₂max (ml/kg.min) 32 vs 52. In the pre and post CR echocardiogram: ejection fraction (%) 50 vs 66, diastolic thickness of the LV posterior wall (mm) 12 vs 10 and interventricular septum (mm) 12 vs 9, left ventricular mass (grams) 299 vs 213. Improvement in quality of life by Minnesota (points) 72 vs 9 (87% improvement), in addition to the reduction of drugs (mg): carvedilol 25 vs 12.5 and withdrawal of Aldactone, maintaining enalapril and acetylsalicylic acid. Throughout the program, the patient's monomorphic ventricular extrasystoles disappeared. **Conclusion:** The CR program appears to be a viable and cost-effective alternative in patients.