

Athlete's heart: Effect of physical detraining - Case report

Wasly Santana Silva¹, Indiana Jesus Santos², Marvyn de Santana do Sacramento³, Jefferson Petto³

1. University Hospital of the Federal University of Sergipe – Aracaju (SE), Brazil

2. Actus Cordios, Cardiovascular and Metabolic Rehabilitation - Salvador (BA), Brazil

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

Background: It is not well established in the literature whether myocardial remodeling caused by physical training can cause a predisposition to negative physiological changes and whether a Guided Physical Detraining Program (*PDFO*) can reverse cardiac adaptations without depressing functional capacity. Therefore, this case report aims to describe the impacts of a *PDFO* on the structural, electrical characteristics and functional capacity of a marathon runner with an Athlete's Heart. **Case description:** Male, 60 years old, 160 cm tall, 53 kg, Asymptomatic, endurance race runner. He carried out training, reaching an average of 80 to 120 km per week, plus constant participation in competitions on Sundays. After laboratory tests (*TEFM*) and Doppler echocardiogram, cardiac changes compatible with Athlete's Heart were found, which led to the desire to reverse the adaptations without losing functional capacity. The *PDFO* began in April 2019, lasting eight months. After this period there was a decrease in left-end systolic diameter 36 vs 30 mm, interventricular septal thickness 10 vs 8 mm, Ventricular Overload (Cornell Index) 31 vs 26 mm, increase in ejection fraction 55 vs 74%, VO_2 peak 53 vs 77%, elimination of ventricular extrasystoles in the final stages and recovery phase of *TEFM*. **Conclusion:** The results raise the hypothesis that *PDFO* is capable of minimizing and reversing cardiac and electrocardiographic structural changes in individuals with Athlete's Heart without negatively impacting functional capacity.