

Ablation of atrial fibrillation by isolation of pulmonary veins as a predictor of improvement in tachycardiomyopathy: Case Summary

Flavio Araujo Motta¹, Marcelo Foradini de Albuquerque², Alessandra Ormundo Ribeiro², Nina Ataide Pinho Barbosa², Cristian Nejm Roderjan³

1. Beneficência Portuguesa de São Paulo – São Paulo (SP), Brazil

2. Cardiolife - *Arritmias Cardiacas* [Cardiac Arrhythmias]

3. Federal University of Rio de Janeiro - Clementino Fraga Filho Hospital - Rio de Janeiro (RJ), Brazil

Introduction: The causes of cardiac ventricular dysfunction include tachycardiomyopathy, which can be characterized by systolic ventricular dysfunction and congestive failure caused by persistent or repetitive tachyarrhythmias, with the important feature of being reversible. Atrial fibrillation is notably the supraventricular arrhythmia with the highest incidence worldwide, it has been increasingly demonstrated that ablation with isolation of the pulmonary veins is the treatment of choice with better results for rhythm control in selected cases. The case in question concerns a male patient 42 years old, with Atrial fibrillation and arterial hypertension, using antihypertensives and diagnosed by the clinical cardiologist as having functional class III - HF. Arrives at the office with magnetic resonance imaging with EF 29% and the left atrium of 4.8cm and indexed volume of 42ml/m², complaining of palpitation and pré-syncope. The patient underwent radiofrequency ablation with antral isolation of the pulmonary veins, using the “High Power short duration technique modified by Burning and running”. After the procedure, he was maintained on a low dose of antiarrhythmic medication for a period of 3 months. After 1 year of follow-up, the patient remained in sinus rhythm. Control was performed using a two-dimensional echocardiogram with the same evaluator as the previous Echo, now showing an EF of 60% with a left atrium of 4.2 cm, with an indexed volume of 38 ml/m². No more symptoms of HF or complaints related to arrhythmia. Currently still using antihypertensive medication and anticoagulation. **Conclusion:** Tachycardiomyopathy is a potentially reversible cause of heart failure and its treatment consists of controlling or reversing the arrhythmia responsible for ventricular dysfunction. Approximately one week after the treatment is established, left ventricular ejection fraction recovery is achieved. A complete reversal of the heart failure condition can be observed in four to six weeks. Although ventricular dysfunction may be reversible, and it is believed that this entity is benign in nature, a substrate for heart failure and sudden death may persist, making it imperative to control tachyarrhythmia.