Chapter 136

Early diagnosis of tachycardiomyopathy with improved ejection fraction: A case report

https://doi.org/10.56238/colleinternhealthscienv1-136

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Keywords: Ablation, Arrhythmias, Tachycardiomyopathy.

1 INTRODUCTION

Tachycardiomyopathy is characterized by systolic ventricular dysfunction and heart failure caused by persistent ventricular or supraventricular tachyarrhythmias with high heart rate, and may evolve to ventricular tachycardia and fibrillation according to the severity of the arrhythmia.

2 OBJECTIVE

To report a clinical case of tachycardiomyopathy with improved ejection fraction and arrhythmia control.

3 CASE REPORT

J.A.F.L., male, 56 years old, from Cajueiro/AL, comes to the consultation on 06/08/2021 mentioning "heart failure for about two years". He reports fatigue to minimal efforts for over two years associated with paresthesia of the extremities. He reports that in October/2019 he presented palpitation, dyspnea, and syncope while working as a bricklayer's laborer, and was referred to the Emergency Room

where he was diagnosed with high response atrial flutter 2:1 with instability and, therefore, 100 J synchronized electrical cardioversion was performed with return to sinus rhythm and he was transferred to the State General Hospital where he was hospitalized for 13 days. After returning home, using hydrochlorothiazide, enalapril, amiodarone, and metoprolol, he presented with sweating, paresthesia of the extremities, and dizziness for two days, and was referred directly to the hospital after the second episode of supraventricular tachycardia. When he returned home, he took amiodarone and metoprolol from October/2019 until March/2021, but continued to present fatigue on minimal effort, muscle weakness, and sporadic dizziness on awakening. He denied comorbidities, gastroesophageal reflux disease, and sleep apnea symptoms. On physical examination, BMI 33.23 Kg/m², BP 155x65 mmHg, cardiac auscultation without alterations, HR 78 bpm and absent posterior tibial and pedial pulses in the left lower limb. Echocardiogram (03/10/2019): AO 35, AE 47, DVD 22, DDFVE 55, DSFVE 43, EDS 15, ED PPVE 12, moderate systolic dysfunction, moderate left ventricular hypertrophy with ejection fraction 44%. Holter (10/16/2019): sinus rhythm, frequent atrial ectopic activity, non-sustained atrial tachycardia and frequent ventricular ectopic activity. Echocardiogram (08/13/2020): AO 37, LA 41, RV 26, LVd 60, LVs 43, IVS 10 and ejection fraction 54%. Holter (07/10/2020): sinus rhythm interspersed with paroxysms of atrial fibrillation, frequent atrial ectopic activity, non-sustained atrial tachycardia and infrequent ventricular ectopic activity. Thus, the diagnosis of tachycardiomyopathy was made, and standard treatment for heart failure with borderline ejection fraction and amiodarone was performed, with improvement of symptoms, and radiofrequency ablation was proposed.

4 CONCLUSION

Tachycardiomyopathy is rare, but in general has a favorable prognosis when early diagnosis and appropriate treatment with radiofrequency ablation.

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