

Rate Control is the key-Tachycardia induced cardiomyopathy

Maria Najam, MD; Shadi Jafari-Esfahani, MD; Nevin Varghese, MD

Introduction:

Tachycardia-induced cardiomyopathy is the systolic dysfunction that results from tachyarrhythmias. It presents symptoms of heart failure and can be reversed with rate control or normalization to sinus rhythm. The aim of presenting this case report is to the awareness of tachycardia-induced cardiomyopathy, which if recognized early can be reversed by the treatment.

Case Presentation:

A 62-year-old male with history of tobacco use presented with orthopnea, palpitations and exertional dyspnea. A month ago, he was seen by his primary care physician for palpitations and was diagnosed with new onset atrial fibrillation. There was gradual progression of his exertional symptoms to NYHA class IV that prompted him to come to the emergency room. Upon admission, he was noted to have atrial fibrillation with rapid ventricular response at 140 bpm. Echocardiogram revealed LV ejection fraction 20 % with dilated LV and RV chambers. His heart rate was controlled with metoprolol and digoxin. He was started on heart failure regimen. Ischemic cardiac workup was unremarkable. He was subsequently followed up in the clinic. The repeat cardiac echocardiogram was noted for marked improvement of LV systolic function and of patient's symptoms. He was continued on rate control and heart failure medications.

Conclusion:

Tachycardia-induced cardiomyopathy can result from various tachyarrhythmias including atrial fibrillation with a rapid ventricular response. In such cases, cardiomyopathy may develop over a few weeks to over a few years. Once tachycardia-induced cardiomyopathy is suspected, treatment should focus on rate control in addition to the management of heart failure. Our case demonstrates how increased awareness of tachycardia induced cardiomyopathy helps in timely diagnosis and can be reversible.