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Case Report

Infiltrating cardiac lipoma presenting as ventricular tachycardia in a young adult



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A twenty-five year-old male, presented to the emergency room with history of palpitations and presyncope of 30 min duration. Electrocardiogram revealed a left bundle branch (LBBB) morphology VT at a rate of 215 beats per minute. Five attempts at DC cardioversion with 200 J biphasic shock and apical-anterior paddle position were unsuccessful. Patient was deeply sedated, intubated, ventilated and was started on Amiodarone 300 mg IV bolus. DC cardioversion about an hour after was successful in restoring sinus rhythm (Fig. 1). Both

Echocardiogram and Cardiac CT revealed an extra-cardiac mass compressing the right ventricle and the right atrium. Cardiac magnetic resonance (CMR) imaging confirmed a $98 \times 37 \times 91$ mm mass in the subepicardial region with fat suppression suggestive of a lipoma, compressing the right ventricle and restricting the right ventricle free wall movement (Fig. 2). Patient underwent urgent surgery on cardiopulmonary bypass support and a large mass measuring $10 \times 10 \times 9$ cm was excised, extending to the inferior surface of left ventricle myocardium that was not evident either on CT or CMR. The tumor was confirmed on histopathology to be lipoma. Patient has been asymptomatic with a normal holter recording off antiarrhythmic medications for 6 months post-surgery. Cardiac lipomas are rare, benign neoplasms that are incidentally detected but can cause life threatening ventricular arrhythmias.¹ Surgical excision in such cases is often curative.² While echocardiography raises the initial suspicion of a cardiac tumor, CT or CMR aids in proper diagnosis. CMR is presently the modality of choice for evaluation of cardiac masses and also provides necessary information on myocardial and pericardial extension, vascularity and extra-cardiac extension. Multidetector CT, with its short acquisition time, is a useful alternative especially in hemodynamically unstable

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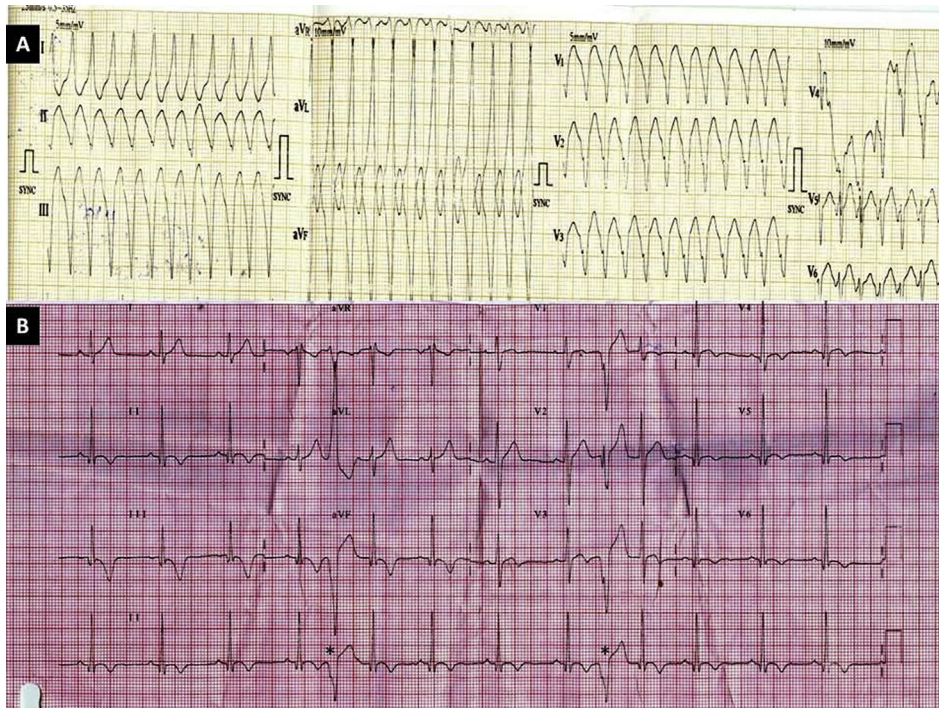


Fig. 1 – 12 lead electrocardiogram: A) During tachycardia-Shows a wide QRS LBBB morphology regular tachycardia with leftward axis and at a rate of 205/min. B) In sinus rhythm-shows monomorphic ventricular ectopics with similar morphology of that of VT (* in rhythm strip). LBBB- left bundle branch block, VT- Ventricular tachycardia.

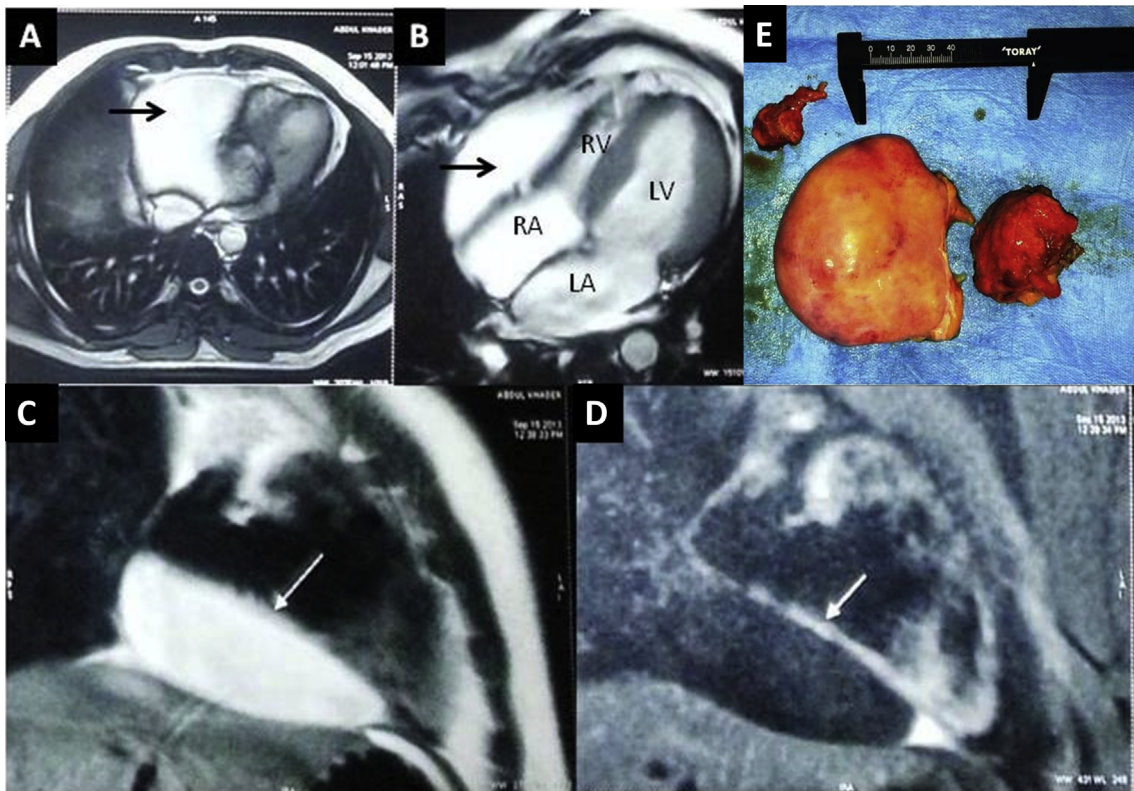


Fig. 2 – Cardiac MRI: A,B) T1 weighted images-reveal a circumscribed hyperintense mass located subepicardially in relation to the lateral and inferior aspects of the RA and RV. C,D) comparison of T1 image(C) and fat suppression sequence (D) of the subepicardial mass in the same view. Notice the radiolucent appearance of the lipoma in the subepicardial location in fat suppressed sequences (D).E) Shows a large circumscribed, encapsulated dumbbell shaped tumor with an intervening stalk. RA- Right atrium.

patients when cardiac masses are suspected on echocardiography.

Conflicts of interest

The authors have none to declare.

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