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A Rare Mimicker of Hypertrophic Cardiomyopathy: Infiltrative Cardiac Lipoma

A 47-year-old woman with hypothyroidism was referred for cardiology evaluation before surgery for a uterine mass. She reported exertional dyspnea over the past year. Electrocardiography showed T-wave inversions in leads V1-V4 and deep S waves in leads DI and aVL (Figure 1). Transthoracic echocardiography demonstrated marked asymmetric septal hypertrophy with right ventricular (RV) cavity curvature and RV diastolic dysfunction (Figure 2A-B). The lesion lacked clear borders and showed no signs of calcification or cystic components, raising suspicion for a cardiac mass. Cardiac magnetic resonance imaging (MRI) showed a broad-based mass along the RV side of the interventricular septum, extending from base to apex and narrowing the RV cavity (65 × 60 × 25 mm). The lesion appeared hyperintense on T1- and T2-weighted images, became

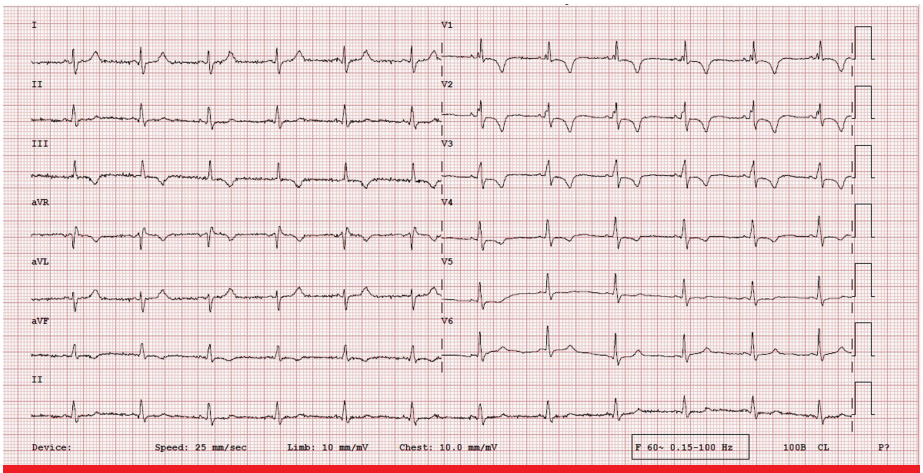

Figure 1. Electrocardiogram. T wave inversions in lead V1-V4 and deep S waves in lead D1-aVL.

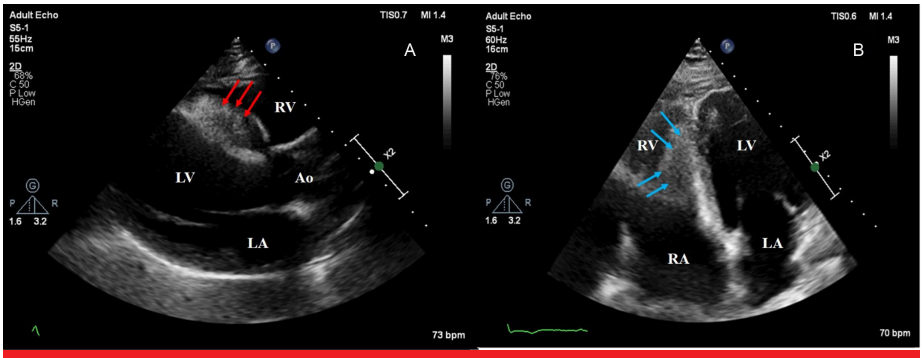

Figure 2. Transthoracic echocardiography. A) Parasternal long axis view. B) Apical 4-chamber view. There is asymmetric hypertrophy markedly seen in interventricular septum, with a right ventricular curvature. (Ao, aorta; RA, right atrium; RV, right ventricle; LA, left atrium; LV, left ventricle).

E-PAGE ORIGINAL IMAGE

Muhammet Tekin[1]
Duygu İnan[1]
Aslan Erdoğan[1]
Ayşe İrem Demirtola Mammadli[2]
Yiğit Can Kartal[3]
Nihan Kayalar[4]
Alev Kılıçgedik[1]

[1]*Department of Cardiology, Başakşehir Çam&Sakura City Hospital, İstanbul, Türkiye*
[2]*Department of Cardiology, Ankara Bilkent City Hospital, Ankara, Türkiye*
[3]*Department of Radiology, Başakşehir Çam&Sakura City Hospital, İstanbul, Türkiye*
[4]*Department of Cardiac Surgery, Başakşehir Çam&Sakura City Hospital, İstanbul, Türkiye*

Corresponding author:
Muhammet Tekin
✉ muhteki@gmail.com

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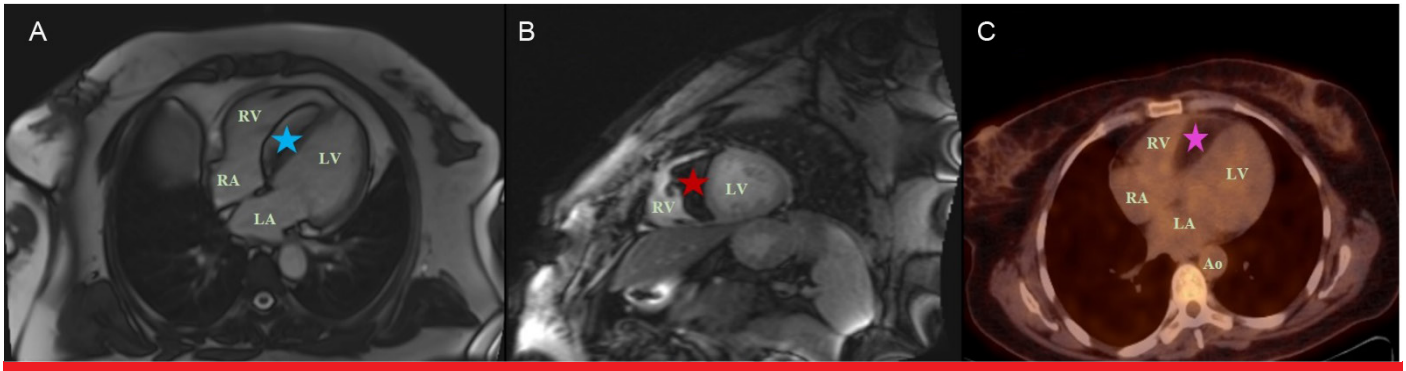

Figure 3. Cardiac MRI images showing a mass lesion along the right border of the interventricular septum, measuring 65 × 60 × 25 mm and extending from the base toward the apex. A) bSSFP sequence reveals peripheral chemical shift artifact indicating fat content. B) Fat-suppressed T2-weighted image shows the lesion as hypointense due to effective fat suppression. The mass protrudes into and narrows the right ventricular cavity. C) Whole-body PET scan (thoracic transverse section) showing a 2 cm hypodense thickening at the interventricular septum without pathological FDG uptake.

hypointense on fat-suppressed T2 sequences, and showed chemical shift artifact on bSSFP images, indicating fat content (Figure 3A-B). No contrast enhancement was observed, and T1 mapping confirmed low T1 values consistent with lipoma. Whole-body positron emission tomography (PET) demonstrated no pathological fluorodeoxyglucose uptake in the lesion, while uterine hypermetabolism was noted (Figure 3C). Despite medical therapy, symptoms persisted, and the mass was surgically excised. Histopathology confirmed infiltrative lipoma (7 × 5.6 × 2.7 cm). The uterine lesion was diagnosed as leiomyoma.

Cardiac lipomas are rare, often asymptomatic, but may cause functional compromise depending on size and location. Multimodality imaging, particularly MRI, plays a key role in distinguishing lipomas from hypertrophic cardiomyopathy and guiding management. Surgical resection should be considered in symptomatic or uncertain cases.

Informed Consent: Detailed information was given to the patient regarding possible contribution of the case report to literature. The patient gave written and verbal consent for the publication of the case report.

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