

Images in  
Cardiovascular Disease



## Cardiac Mass: Left Atrial Myxoma

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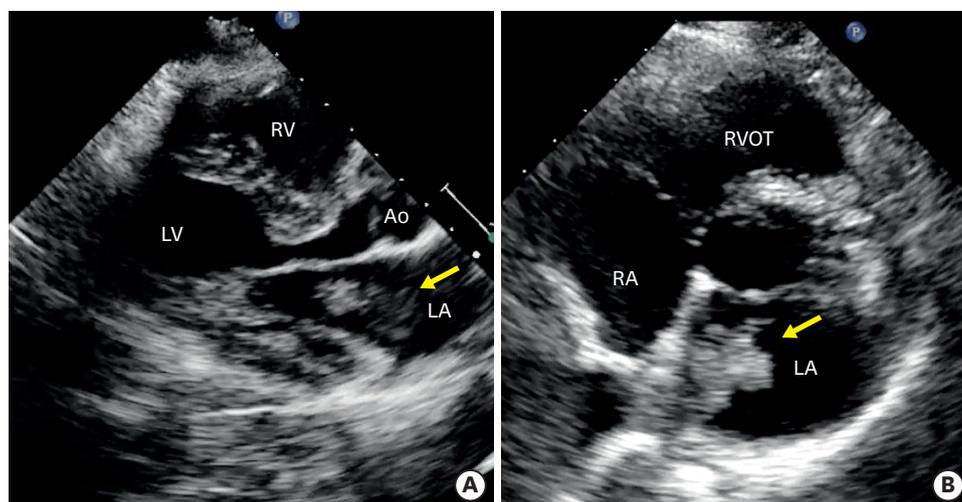
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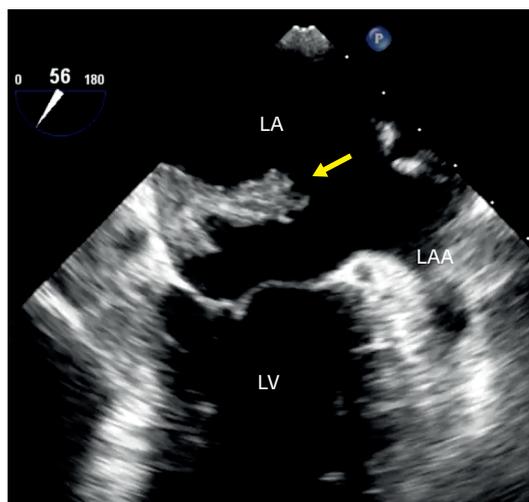
Conflict of Interest

The authors have no financial conflicts of  
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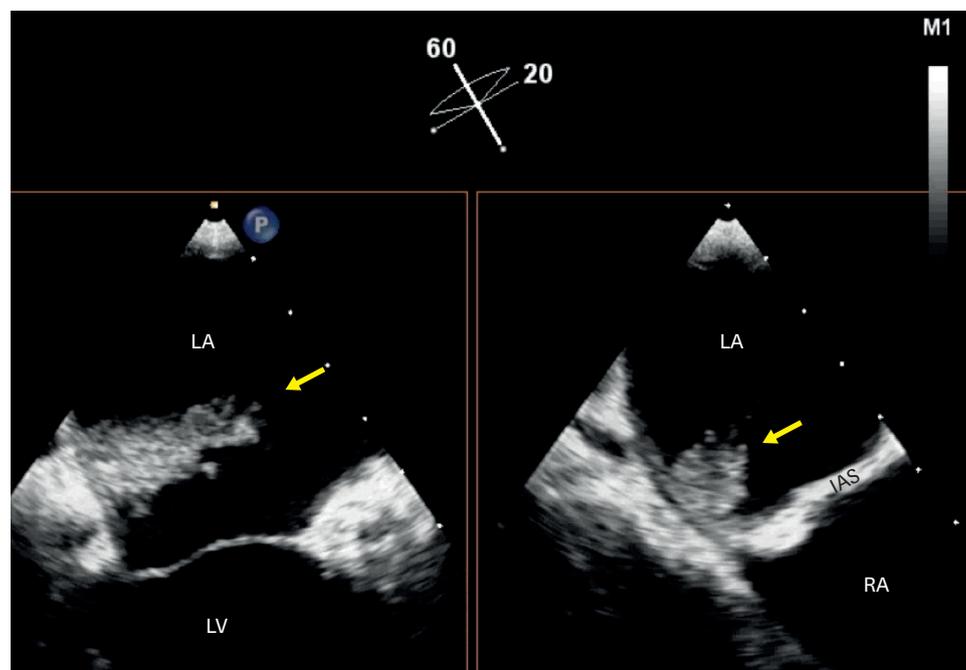
A 62-year-old woman presented with a history of dyslipidemia, hypertension, and kidney transplantation 23 years prior due to chronic kidney insufficiency of unknown cause. She was treated with cyclosporine and mycophenolate mofetil. Due to complaints of tiredness and precordial oppression, transthoracic echocardiography was ordered by a nephrologist. The exam revealed a left atrial mass with irregular edges that very mobile and apparently adherent to the interatrial septum / posterior wall of the left atrium (**Figure 1** and **Movie 1**). The left ventricle ejection fraction was normal and the remaining exam was unremarkable. The patient was hospitalized for close surveillance and study of the left atrial mass. She underwent transesophageal echocardiography that confirmed a large mass (2.5 cm in diameter), friable and very mobile, non-pediculated with a large, 1.4-cm base, apparently adherent to the transition between the left atrium posterior wall and interatrial septum, just above the mitral annulus (**Figures 2** and **3**). During atrial systole, this mass exhibited a slight protrusion into the mitral valve, not exceeding the valvular coaptation plan, causing no obstruction nor significant regurgitation (**Movie 2**). Cardiac magnetic resonance imaging (MRI) was also performed, showing a high-intensity signal on fluid-sensitive and fat-suppressed MRI, and heterogeneous mild late contrast enhancement (**Figure 4**, **Movie 3**). The



**Figure 1.** Transthoracic echocardiogram. (A) Parasternal long-axis view demonstrating a moving mass in the LA. (B) Parasternal short-axis view showing the LA mass, which had irregular edges and appeared adherent to the interatrial septum / posterior wall of the LA. Ao: aorta, LA: left atrium, LV: left ventricle, RA: right atrium, RV: right ventricle, RVOT: right ventricle outflow tract.



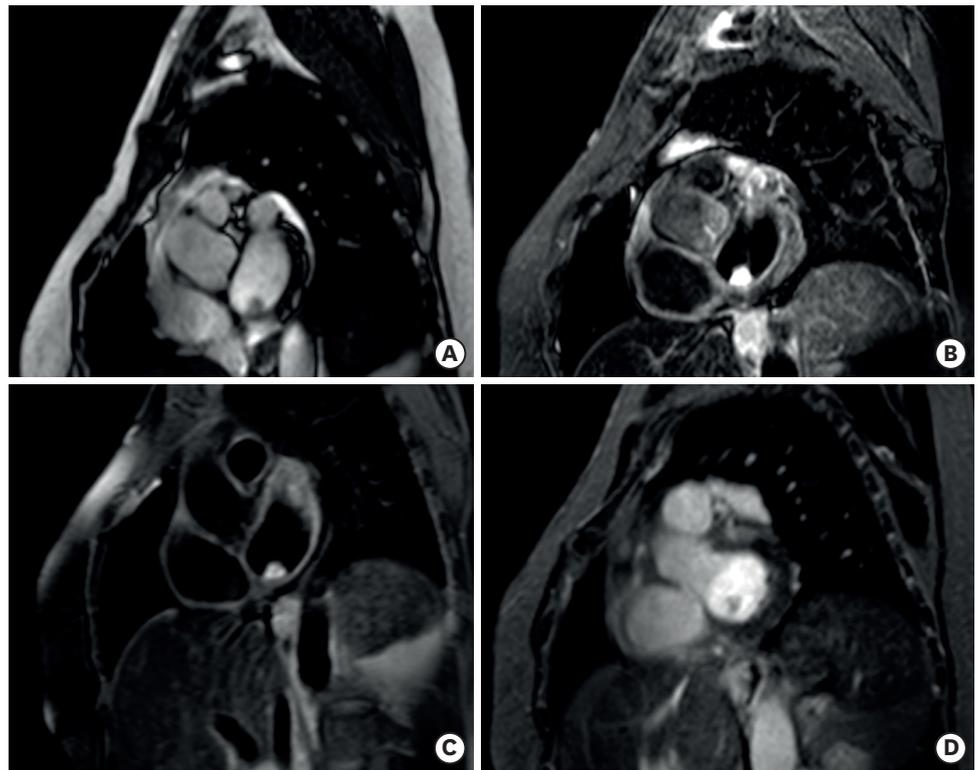
**Figure 2.** Transesophageal echocardiogram (midesophageal 2 chamber view). Large and very mobile mass, non-pedicated with a large, 1.4-cm base, located just above the mitral annulus. During atrial systole, this mass exhibited slight protrusion into the mitral valve, not exceeding the valvular coaptation plan, causing no obstruction nor significant regurgitation. LA: left atrium, LAA: left atrium appendage, LV: left ventricle.



**Figure 3.** Transesophageal echocardiogram (two chamber view) showing the LA with a friable and very mobile mass just above the mitral annulus on the left, and on the right image with 90° rotation, showing its location at the transition between the LA posterior wall and interatrial septum. IAS: inter-atrium septum, LA: left atrium, LV: left ventricle, RA: right atrium.

mass did not appear to invade adjacent structures, which favored the diagnosis of a benign tumor. The patient underwent surgery to remove the mass. Pathologic analysis confirmed the diagnosis of a cardiac myxoma.

Myxomas are the most common primary cardiac tumor and typically occur in women aged 30-60 years.<sup>1)</sup> Classically, myxomas arise within the left atrium from the atrial septum near



**Figure 4.** Cardiac MRI. (A) Cine image SSFP sequence of the left atrial mass. (B) High-intensity signal on the fluid-sensitive sequence (T2 STIR). (C) High-intensity signal on the fat-suppressed image. (D) Left atrial mass with heterogeneous mild late contrast enhancement. SSFP: steady-state free precession, T2 STIR: short inversion time inversion recovery.

the fossa ovalis, attached via a narrow stalk.<sup>2)</sup> They can present with a smooth or villous appearance and tend to be associated with embolic phenomena and constitutional symptoms resulting from the interleukin-6 secretion.<sup>3)</sup>

We describe a case of a left atrial myxoma with an atypical appearance and location, highlighting the diagnostic challenge that cardiac masses present to physicians. Imaging techniques are crucial to characterization and surgery planning, but only histologic analysis enables definitive diagnosis.

## SUPPLEMENTARY MATERIALS

### Movie 1

Transthoracic echocardiogram (modified parasternal short-axis view) showing the LA mass adherent to the interatrial septum / posterior wall of the LA. LA: left atrium, RA: right atrium, RV: right ventricle.

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**Movie 2**

Transesophageal echocardiogram (midesophageal 2 chamber view). Mobile left atrial mass with a large base, located just above the mitral annulus. Please note that during atrial systole, this mass exhibited slight protrusion into the mitral valve. LA: left atrium, LAA: left atrium appendage, LV: left ventricle.

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**Movie 3**

Cardiac MRI. Cine image SSFP showing the left atrial mass which was iso-intense to myocardium in this sequence. SSFP: steady-state free precession.

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