

## Clinical Image

### Atrial Mass Versus Thrombus: A Clinical Dilemma

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**Received:** 2019-November-14

**Accepted:** 2019-December-30

**DOI:** 10.4274/balkanmedj.galenos.2019.11.79

**Cite this article as:** Kate Y, Syed MP, Doshi A, Patil S, Kumar D. Atrial Mass Versus Thrombus. *Balkan Med J*

An 84-year-old female with a past medical history significant for hyperlipidemia, hypertension, impaired glucose tolerance and asthma presented to the hospital with progressive shortness of breath of 2 weeks duration and worsening lower extremity swelling. She saw her primary care physician for the same symptoms and was started on furosemide prior to her presentation. Her lower extremity swelling and symptoms failed to improve on furosemide which prompted her visit to the emergency room.

Upon presentation, she was noted to be in new-onset atrial fibrillation with a heart rate of 170 beats per minute. Physical exam revealed irregularly irregular heart rhythm with bibasilar crackles on auscultation. Initial labs were normal except hemoglobin of 11.3, pro-Bnp of 5197 and INR of 1.1. She received oral diltiazem which failed to improve her heart rate and eventually patient was started on diltiazem drip. She was also loaded with IV digoxin and was initiated on anticoagulation with enoxaparin.

As part of the cardiology workup, she had a transthoracic echocardiogram (TTE) that showed left ventricular ejection fraction (LVEF) of 40 to 45% and mild to moderate global hypokinesis. Right ventricle was dilated with mildly reduced systolic function, biatrial enlargement with severe tricuspid regurgitation and pulmonary artery systolic pressure of 45 mm of Hg. She was also found to have a hypermobile mass in the left atrium measuring 2.39 cm x 1.1cm attached to the interatrial septum. Initial differential diagnosis included a myxoma, thrombus, or other tumors. She was started on a heparin drip preemptively while transesophageal echocardiogram (TEE) was being planned to rule out a large thrombus. TEE confirmed a large mass in the left atrium attached to the septum by a thin stalk measuring up to 4.3 cm in length. (Figure 1, Video 1(2D), Video 2 (3D)) Spontaneous contrast was seen in the L atrial appendix and no thrombus was detected. The patient had subsequent surgical excision of the mass and ligation of the left atrial appendage using atrial clip device. The pathology confirmed the findings of left atrial myxoma.

We want to highlight the diagnostic dilemma presented in this scenario. An acute presentation of dyspnea (seen more with left sided myxoma as compared to right sided myxoma) (1,2) in the setting of new-onset atrial fibrillation can have broad etiology with varied implications. A mass can be easily mistaken as a thrombus (3) which changes the line of management especially if cardioversion is being planned. In our patient, TEE was instrumental in the characterization of the atrial mass which further guided surgical management for the mass over medical management of the thrombus. (4,5)

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#### Supplementary Material



**FIG. 1.** TEE showing 4.3 cm mass originating from left atrium and protruding into the mitral orifice.

Video 1(2D), Video 2 (3D): TEE mapping motion of the left atrial mass in systole and diastole.