

Technologist presentation

## The case of the disappearing left ventricular apical thrombus

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A 60-year-old male presented to the cardiologist for symptoms of palpitations. Over three months, he reported an increase in palpitations with a heart rate ranging in the 140s. He had an incident of acute right foot pain with a subsequent residual cool right foot and toe with numbness.

In follow-up, the patient was found to be in atrial flutter with a rate of 136. An echocardiogram showed severe left ventricular (LV) systolic dysfunction and a non-mobile round echodensity in the apex measuring 2.2cm, consistent with an LV thrombus.

He was admitted to the hospital for anticoagulation, and a cardiac MRI was ordered.

Anatomic cine imaging was performed using real-time techniques due to arrhythmia. A freely mobile structure measuring 2.6x1.3x1.4cm with a thin, threadlike stalk was seen in the LV apex (Fig 1).

Sixteen minutes into the exam, the LV apical mass was still visualized; however, at eighteen minutes, the structure was no longer visible in either a short-axis apical view or a 4-chamber view (Fig 2). Upon inquiry the patient reported mild right-sided back pain that he attributed to lying flat. There were no neurologic symptoms or extremity pain or weakness, and the patient was hemodynamically stable. Limited additional imaging was performed to confirm the absence of intracardiac mass, and the exam

was quickly terminated to transfer the patient back to the floor.

CT of the thorax, abdomen and pelvis was performed and showed multiple wedge-shaped hypoenhanced regions within both kidneys. (Fig 3). Due to the patient's stable condition, he was continued on the same anticoagulation regimen as upon admission, and no additional aggressive measures were pursued.

Subsequently, the patient had multiple stable serial Cr levels (1.3-1.4) over the course of a month, and the patient remained asymptomatic on outpatient oral anticoagulation.

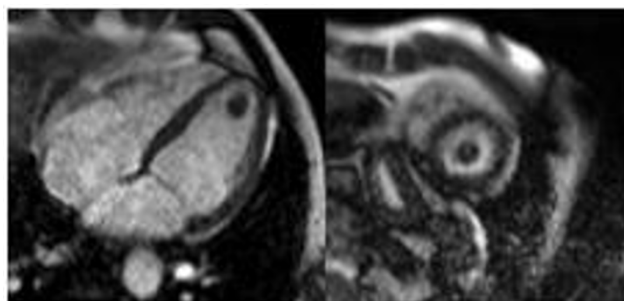
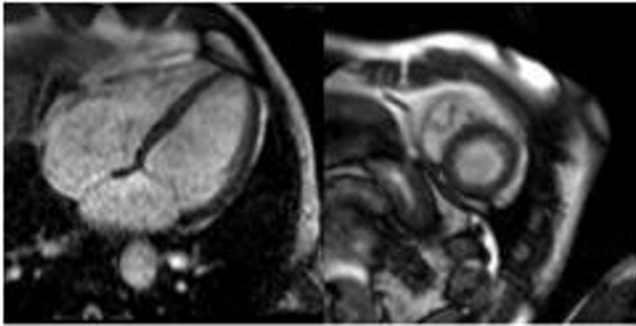
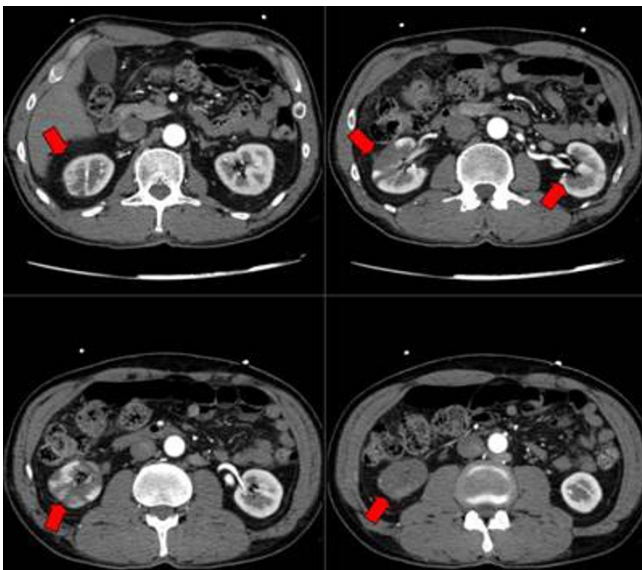


Figure 1



**Figure 2**

Presumably, the etiology of the patient's thrombus was related to the atrial flutter with either a non-specific cardiomyopathy or tachycardia-induced cardiomyopathy. Various studies report detectable thrombi in 8-14% of patients with atrial fibrillation. Peripheral embolization reportedly occurs at a rate of 6.3%. As demonstrated by the discussed case, it is possible that the actual embolic rate is higher.



**Figure 3**

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