

# Thrombus-in-Transit Entrapped in a Patent Foramen Ovale

and Related to Underlying Antiphospholipid Syndrome

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**A** 55-year-old man with a history of hypertension, diabetes mellitus, and recently diagnosed new-onset heart failure presented with dyspnea on exertion and pre-syncope. A transthoracic echocardiogram revealed a 4.5 × 1.2-cm biatrial thrombus that was traversing a patent foramen ovale (PFO) and abutting both atrioventricular valves (Figs. 1 and 2). The patient had no symptoms consistent with pulmonary or systemic embolization, so he did not undergo an evaluation for this. However, a Doppler-mode echocardiographic study of the lower extremities revealed acute venous thrombosis in the distal popliteal vein. Because of the substantial mobility of the thrombus and the risk of a thromboembolic event, the patient underwent emergency thrombectomy and closure of the PFO. Results of a hypercoagulability evaluation were positive for antiphospholipid antibody. The patient recovered uneventfully from the surgery but ultimately refused long-term anticoagulation therapy.

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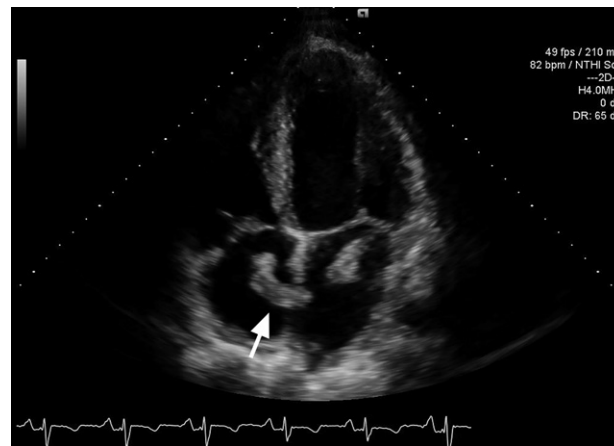
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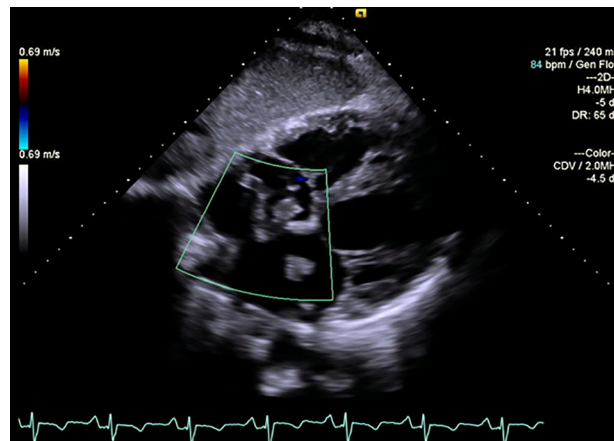
## Comment

Thrombus-in-transit can present with various symptoms, including tachycardia, shortness of breath, and chest pain atypical of angina.<sup>1-5</sup> It is often associated with clinical



**Fig. 1** Transthoracic echocardiogram (4-chamber view) shows a 4.5 × 1.2-cm mobile thrombus (arrow) crossing the intra-atrial septum through a patent foramen ovale.

Supplemental motion image is available for Figure 1.



**Fig. 2** Transthoracic echocardiogram (subcostal view) shows a large thrombus crossing a patent foramen ovale. The thrombus extends to the right ventricle during diastole.

Supplemental motion image is available for Figure 2.

risk factors such as hypercoagulability disease, cancer, and estrogen use.<sup>1-3</sup> Thrombus-in-transit is frequently associated with pulmonary embolism or paradoxical embolism.<sup>1</sup> Treatment options include anticoagulation, administration of tissue plasminogen activator, and surgical removal,<sup>1</sup> but the optimal treatment approach is unknown.<sup>5</sup> In most reported cases, patients underwent surgical removal, as did our patient. To our knowledge, this is the first reported case of thrombus-in-transit related to underlying antiphospholipid syndrome.

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