“To and Fro” Paradoxical Thrombus in the Left Heart

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Deep vein thrombosis (DVT) often occurs after arthroplasty. We encountered the case of an 85-year-old woman who had received right bipolar hip arthroplasty 3 months earlier. Although edoxaban 30 mg/day had been prescribed, on her own accord the patient stopped taking the medication after 2 months. One month later, she presented with dyspnea on effort, left chest pain and leg edema. Transthoracic echocardiography (TTE) showed an elongated movable mass with portions in both atria (Figure, Movie S1). Moreover, the tip of the mass moved into and out of the left ventricle with each heart beat. Dilatation of the right ventricle was also found, and the tricuspid regurgitation pressure gradient was elevated to 60 mmHg. There were no findings indicating left heart failure. Enhanced computed tomography showed a thrombus in the main pulmonary artery as well as DVT. This indicated a combination of acute pulmonary embolism with a paradoxical embolism caused by DVT. After 2 weeks of thrombolytic therapy with heparin, the thrombus in the left atrium and the dilatation of the right ventricle had disappeared on TTE. Transesophageal echocardiography after treatment showed an atrial septal aneurism, while contrast echocardiography with Valsalva maneuvers showed a slight right-to-left shunt. The mass was diagnosed as a thrombus passing through the patent foramen ovale, where it had become stuck.

Disclosures
The authors declare no conflicts of interest.

Reference

Supplementary Files

Supplementary File 1
Movie S1. Transthoracic echocardiography, 4-chamber view, showing movement of the thrombus through the mitral valve, beat-by-beat. An atrial septal aneurism is also detected.

Please find supplementary file(s);

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Figure. Transthoracic echocardiography, 4-chamber view, in (A, B) diastole and (C, D) systole. (B, D), high-resolution views of (A, C), respectively. A paradoxical thrombus was situated in both atria and the left ventricle (LV; white arrows). The tip of the mass moved into and out of the LV with each heart beat (Movie S1). LA, left atrium; RA, right atrium; RV, right ventricle.