A 56-year-old man was admitted with shortness of breath and a painful and pulseless cold left leg. A successful surgical embolectomy from the left femoral artery was performed. A ventilation-perfusion lung scan was consistent with multiple pulmonary emboli. Two months previously, the patient had an anterolateral non–Q-wave myocardial infarction. At coronary arteriography, the coronaries were normal apart from mild (40%) plaque disease in the proximal left anterior descending artery. He had deep venous thrombosis of the left leg at the age of 54. He also had had a cerebrovascular accident with residual right-sided weakness at the age of 41.

The patient was referred for cardiac evaluation. A subsequent transesophageal echocardiogram revealed a large thrombus straddling a patent foramen ovale (PFO) and crossing from the right to the left atrium, together with an interatrial septal aneurysm (Figure 1). The thrombus prolapsed into the left and right ventricles through the tricuspid and mitral valves (Figure 2).

At emergency thromboembolectomy under cardiopulmonary bypass, a 19-cm-long thrombus, which crossed the interatrial septum, was removed, and the PFO was closed by direct suture. A left internal mammary artery graft was inserted into the left anterior descending coronary artery. A repeat echocardiogram was normal (Figure 3).

PFO is present in 17% to 35% of persons at autopsy in all age groups, and it is associated with potential paradoxical embolism in 16% of cases. Imaging of thrombi crossing a PFO and reports on paradoxical embolism causing a myocardial infarction in people with normal coronary arteries are rare. Echocardiography plays an important role in recognizing this potentially life-threatening but treatable condition.
Figure 1. Transesophageal echocardiogram showing a large thrombus (arrow) trapped in a PFO and an interatrial septal aneurysm (arrowhead). A, Transverse short-axis view. B, Horizontal 4-chamber view. Due to high mobility, no continuity can be seen in a single frame. RA indicates right atrium; LV, left ventricle; RV, right ventricle; AO, aorta; and IAS, interatrial septum.

Figure 2. Transesophageal echocardiogram, horizontal 4-chamber view, showing the thrombus prolapsing into the left ventricle (LV; arrow) through the mitral valve (arrowhead). RV indicates right ventricle; LA, left atrium.

Figure 3. Postoperative transesophageal echocardiogram is free of thrombus. A, Transverse short-axis view. Arrow indicates intact interatrial septum. B, Horizontal 4-chamber view. LA indicates left atrium; RA, right atrium; RV, right ventricle; and LVOT, left ventricular outflow tract.
Impending Paradoxical Embolism
M. Egred, J. C. Patel and S. Walton

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