Left Ventricular Thromboembolism

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Left ventricular thrombi can occur after acute myocardial infarction or in patients with chronic left ventricular dysfunction. Stasis of blood within areas of akinesis or dyskinesis is thought to be the mechanism by which thrombi form. Cardioembolic stroke is the most feared complication of left ventricular thrombi.

A 37-year-old man with progressive heart failure after myocardial infarction was found to have severe left ventricular dysfunction and a left ventricular posterobasal pseudoaneurysm. The patient underwent patch repair of the pseudoaneurysm and coronary artery bypass graft surgery. Intraoperative transesophageal echocardiography was used to image the heart throughout the surgical procedure. After separation of the patient from cardiopulmonary bypass, left ventricular function remained severely depressed, and a protruding and mobile thrombus was observed to form at the left ventricular apex, a site distinct from the aneurysm repair. The left ventricular thrombus took only several minutes to develop and then embolized from the heart into the peripheral arterial circulation (Figure). Surprisingly, the patient suffered no neurological sequelae. The patient was discharged home without complications on chronic anticoagulation therapy with warfarin.

Serial transesophageal echocardiographic images as left ventricular thrombus embolized into peripheral arterial circulation. 1, A protruding and mobile thrombus is seen at left ventricular (LV) apex. 2, Thrombus has embolized and is now floating free in LV cavity. 3, Thrombus is now below aortic valve in LV outflow tract. 4, Thrombus has embolized distally out of heart into peripheral arterial circulation. LA indicates left atrium.