Leaking Left Ventricular Pseudoaneurysm

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A 56-year-old obese woman with severe steroid- and oxygen-dependent chronic obstructive pulmonary disease was thought to have experienced an apical myocardial infarction at home on the basis of review of history. When she was evaluated 3 months later at an outside hospital for recurrent chest pain, a cardiac catheterization revealed a total distal occlusion of the left anterior descending coronary artery, borderline occlusive disease in other coronary arteries, and an “apical aneurysm” by left ventriculography. She was continued on medical therapy.

During a subsequent hospital admission 6 months after the index infarction for recurrent atypical chest pain, an echocardiogram was reported to demonstrate a pseudoaneurysm with a moderate-size pericardial effusion. When the patient was seen shortly thereafter at our institution, a repeat echocardiogram (Figures 1 and 2) similarly demonstrated a probable left ventricular pseudoaneurysm with a large pericardial effusion. Subsequent pericardiocentesis with drainage of bloody aspirate suggested that the pseudoaneurysm was the source of effusion.

Given the patient’s high surgical risk, it was elected to confirm the finding preoperatively with MRI (Figure 3).

The patient subsequently underwent left ventricular endoaneurysmorraphy with patch closure and 4-vessel coronary artery bypass surgery. Surgery and pathological sections confirmed the presence of a pseudoaneurysm. She survived surgery, but unfortunately died suddenly 2 days after surgery.

Figure 1. Apical 2-chamber view demonstrating apical pseudoaneurysm with laminated thrombus and pericardial effusion.

Figure 2. Off-axis apical 4-chamber view demonstrating pseudoaneurysm with narrow neck and pericardial effusion. RV indicates right ventricle; LV, left ventricle.

Figure 3. Four-chamber view demonstrating apical pseudoaneurysm with thrombus within wall (curved arrow) and narrow neck of pseudoaneurysm (arrowheads). RA indicates right atrium; RV, right ventricle; LA, left atrium; and LV, left ventricle.
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