

dial cleft, with benign acute prognosis. The patient recovered slowly and was discharged after 10 days.

Therefore, an atypical myocardial cleft was the final diagnosis, incidentally discovered using TTE. CMR plays a vital role for acute diagnosis and management. In this particular setting of extremely dilated LV, a thorough imaging follow-up plan (TTE and CMR) is mandatory, with LVO being prone to rupture.

Informed consent: Written informed consent was obtained from the patient.

Video 1. Echocardiography video. A small LVO (187 mm) having concordant motion with adjacent segments was noted in the apical part of the interventricular septum, suggesting a pseudoaneurysm

Video 2. CMR video. Steady-state free precession image revealing septal apical myocardial cleft and small pericardial effusion. LVO had thin, well-perfused myocardium having concordant motion with the adjacent segments, clearly excluding pseudoaneurysm

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Retained outflow graft following the explantation of left ventricular assist device

A 21-year-old man underwent coronary angiography because he presented with chest pain, serum troponin elevation, and a decline in left ventricular ejection fraction. His medical history included dilated cardiomyopathy, left ventricular assist device implantation (Heartmate II) 48 months prior, and the explantation of this device because of recovery 5 months prior (Figs. 1 and 2). Coronary angiography showed normal coronary arteries. During right coronary artery canalization attempts, the Judkins right catheter indwelled outside of the aorta easily, but

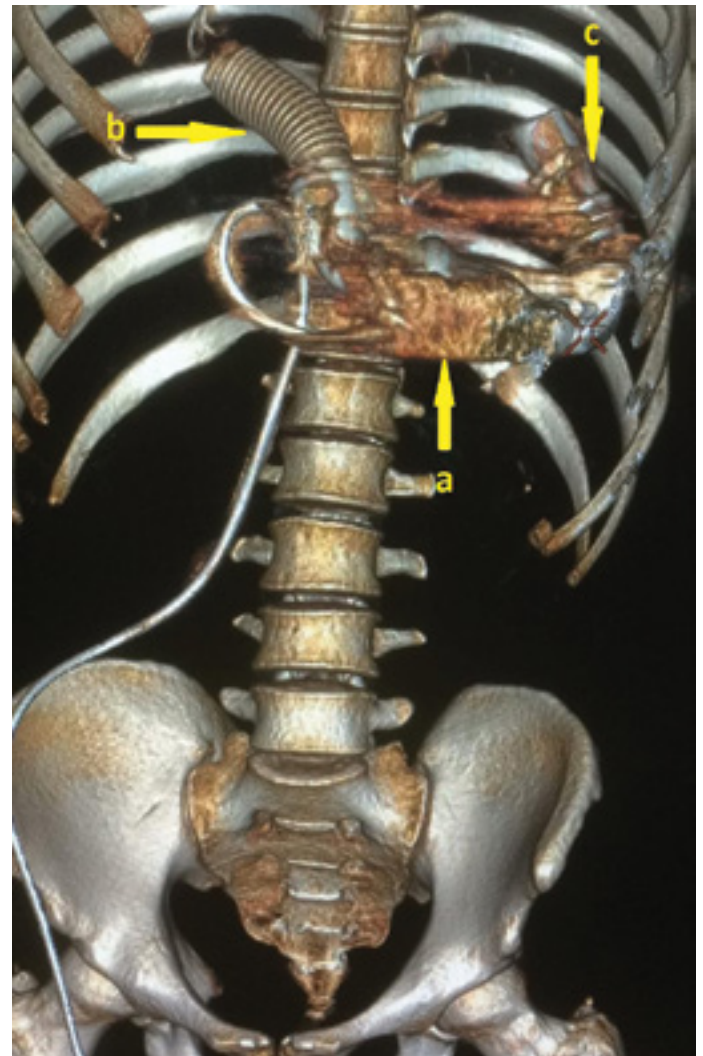


Figure 1. Computed tomography image of left ventricular assist device (Heartmate II) demonstrating the pump (a), outflow graft (b), and inflow cannulas (c)

we could not ascertain the reason for this. However, we observed a faint contrast efflux from the ascending aorta during nonselective aortography (Video 1). The angiography procedure concluded with no complications. Subsequently, we reviewed medical and operation records in detail. Although the pump of the device had been withdrawn, outflow graft had been retained in situ following its detachment from the pump. The inflow cannula had been withdrawn, and a plug had been placed within the retained sewing ring. The distal ostia of the outflow graft had been closed using a primary stitch, whereas the aortic ostia had remained open. The outflow graft was supposed to be closed with blood stasis and clot formation following operation. Various device explantation techniques have been described in the literature with differing degrees of retained device material (1). These techniques include the complete pump explant, which was used in this case, inflow and outflow ligation with retention of inlet cannula, outflow graft ligation with retention of other parts, and driveline transection with the pump left in

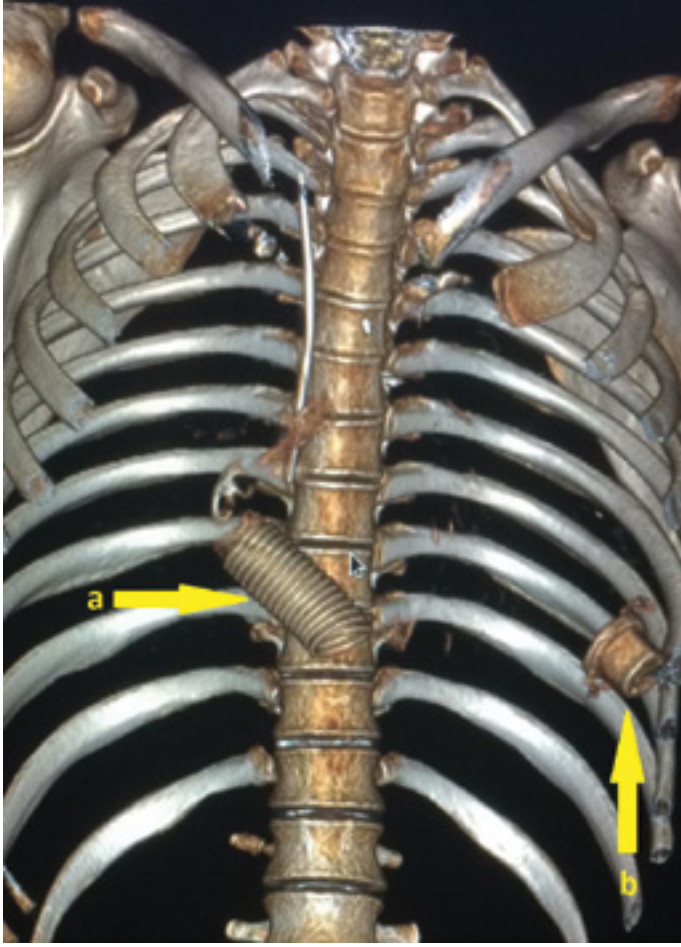


Figure 2. Computed tomography image of retained outflow graft (a) and retained plugged sewing ring of inflow cannula (b) following pump explantation

place. Cardiologists should be aware of this retained nonradiopaque graft when conducting angiography for such patients. Catheters may indwell the outflow graft, which has blood clots that may result in systemic embolization.

Informed consent: Written informed consent was obtained from the patient.

Reference

1. Baldwin AC, Sandoval E, Letsou GV, Mallidi HR, Cohn WE, Frazier OH. Surgical approach to continuous-flow left ventricular assist device explantation: A comparison of outcomes. *J Thorac Cardiovasc Surg* 2016; 151: 192-8. [\[CrossRef\]](#)

Video 1. Nonselective aortography with right Judkins catheter demonstrating a faint contrast efflux from the ascending aorta.

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