

## IMAGES IN CARDIOLOGY



Figure 1.



Figure 2.

### Prosthetic Aortic Valve Thrombosis After Left Ventricular Assist Device Implantation

A 54-year-old man had undergone aortic valve replacement with a valve graft according to the Bentall-Bono technique because of severe stenosis and aneurysm of the ascending aorta 14 years ago. He had been hospitalized several times over the past 2 years for congestive heart failure and progressive worsening of left ventricular (LV) ejection fraction, clinically classified as New York Heart Association functional class III-IV. After meeting the specific requirements, he was included on the heart transplantation (HT) waiting list.

During his last hospitalization for heart failure, the patient presented various episodes of hemodynamic decompensation despite intravenous inotropic and vasodilator treatment. Implantation of an LV assist device (Thoratec®) was used as a bridge until HT could be performed. An apical cannula was placed to drain the LV and the outlet cannula was anastomosed to the ascending aorta valve graft, without complications. Anticoagulation initially consisted of low molecular weight heparin, and later acenocoumarol.

After 13 days of mechanical support, the patient received an orthotopic HT. While on the LV assist device there had been no clinical evidence of systemic thromboembolic events. The postoperative course after transplantation was satisfactory and the patient was discharged on the tenth day without evidence of peripheral embolisms.

The most frequent and feared complications associated with LV assist devices are thromboembolic events. Despite proper anticoagulation, the absence of flow through the aortic valve led to thrombotic formation and complete thrombosis of the mechanical prosthesis (Figures 1 and 2). Macroscopic images of the aortic valve prosthesis viewed from the LV are presented.

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