Chronic mitral-aortic fibrosa pseudoaneurysm after aortic valve replacement

Marcio Sommer Bittencourt*, Edward Hulten, Ron Blankstein and Michael Steigner

Noninvasive Cardiovascular Imaging Program, Division of Cardiovascular Medicine, Departments of Medicine and Radiology, Brigham and Women’s Hospital and Harvard Medical School, Boston, MA, USA

* Corresponding author. Department of Medicine (Cardiovascular Division), Brigham and Women’s Hospital, 75 Francis St., Boston, MA 02115, USA. Tel: +1-855-2100289; e-mail: mbittencourt@partners.org (M.S. Bittencourt).

Received 18 April 2012; accepted 25 April 2012

Keywords: Aortic valve replacement • Pseudoaneurysm • Cardiac computed tomography

A 67-year-old male with previous tuberculous pericarditis with pericardiectomy and two prior aortic valve replacements was found to have a posterior aortic pseudoaneurysm in a transesophageal echocardiogram. A computed tomography was ordered (Figs 1 and 2 and Supplementary Video 1). Due to the complicated anatomy of the aneurysm and the extensive pericardial calcification, the risks of a fourth surgery were considered high, and the patient was discharged with close clinical follow-up.

Supplementary material (Video 1) is available at EJCTS online.

**Figure 1:** (A) Cardiac computed tomography 3D volume-rendered reconstruction. A 43 × 35 × 26 mm mitral-aortic intervalvular fibrosa pseudoaneurysm (yellow) adjacent to the left main coronary artery extending posterior to the aorta can be seen. The communication between the pseudoaneurysm and the left ventricle (pink) can be easily seen (purple arrow). Coronary arteries (red) and the extensive pericardial calcification can also be visualized (blue arrows). (B) Right cranial view of the same reconstruction demonstrating the close relation between the pseudoaneurysm and the left main coronary artery.

**Figure 2:** (A) Two-dimensional axial image during systole. The two aortic valve discs (white) are open and the communication between the left ventricle and the pseudoaneurysm is seen (purple arrow). (B) Two-dimensional multiplanar reformats demonstrating the aortic mechanical valve, the pseudoaneurysm and the marked pericardial calcification (black arrows). RA: right atrium; LA: left atrium; LV: left ventricle; RV: right ventricle; PS-A: pseudoaneurysm; Ao: aorta.