Long haul endocarditis and a case of excess baggage

Paul Scully1, Christopher Blauth1, John L. Klein2, and Ronak Rajani1*

1Department of Cardiology and Cardiothoracic Surgery, Guy’s and St Thomas’ NHS Foundation Trust, 6th Floor, East Wing, London SE1 7EH, UK; and 2Department of Infectious Disease, Guy’s and St Thomas’ NHS Foundation Trust, London, UK

* Corresponding author. Tel: +44 207 7188 1004, Fax: +44 208 399 4699, Email: dr.r.rajani@gmail.com

A 50-year-old woman had implantation of an aortic homograft and a mitral valve repair in 2014 for Streptococcus dysgalactiae endocarditis. Nine months later she presented with sepsis and blood cultures again grew Streptococcus dysgalactiae. She had type II diabetes with peripheral vascular disease and investigation showed osteomyelitis of the right great toe and first metatarsal. The trans-thoracic echocardiogram showed an abscess 5 cm² in diameter behind the heart in the basal posterolateral segment of the LV. There was severe mitral regurgitation but the other valves were intact.

The surgical risk was judged to be prohibitive but she improved and remained haemodynamically stable, completing a 7-week antibiotic course (intravenous amoxicillin and gentamicin initially followed by benzylpenicillin alone). She underwent localized amputation for chronic foot osteomyelitis and as a potential source of endocarditis. The plan was to defer surgery to allow tissue healing. She was readmitted in heart failure 2 months after antibiotic completion. Echocardiography and coronary computed tomography showed abscess resolution but a large pseudoaneurysm (Panels A–F). After stabilization, she underwent successful mechanical mitral valve replacement and left ventricular repair with a bovine pericardial patch.

Left ventricular pseudoaneurysms are an uncommon finding. Approximately 50% complicate myocardial infarctions particularly of the inferior wall and 33% occur post cardiothoracic surgery. Infective endocarditis is a cause in only 5 with 1% being attributed to mitral valve endocarditis. Surgery is indicated to avoid ventricular rupture and congestive cardiac failure with medically managed pseudoaneurysms carrying a mortality rate of ≏50%.

Panel (A) Transthoracic echocardiogram short-axis view below the mitral valve repair. The closed arrow shows the neck. (B) Colour Doppler flow into the pseudoaneurysm (PsAn). (C) Cardiac computed tomography—multiplanar reformatted apical two-chamber view orifice and the extent and size of the pseudoaneurysm (20 × 10 mm) as it extends inferiorly. (D) The 3D volume rendered cardiac CT image of the pseudoaneurysm sagittal plane. (E) Surgical view of the inside of the PsAn and the entry point into the left ventricle (black arrow). (F) The post-surgical echocardiographic image shows an intact basal inferior wall (closed arrow) with no colour flow into the space behind the heart (open arrow). RV, right ventricle; PsAn, pseudoaneurysm; LV, left ventricle; RA, right atrium; MPA, main pulmonary artery; Ao, aorta.