Partial aortic graft disconnection due to endocarditis: a rare cause of dynamic coronary artery compression

Annina A. Studer Bruengger\textsuperscript{a}, David J. Kurz\textsuperscript{a}, Michele Genoni\textsuperscript{b}, Alain M. Bernheim\textsuperscript{a}

\textsuperscript{a} Department of Cardiology, City Hospital Triemli, Zurich, Switzerland
\textsuperscript{b} Clinic for Cardiac Surgery, City Hospital Triemli, Zurich, Switzerland

This 55-year-old male patient was referred to our institution because of mild exertional dyspnoea. Surgical repair of an aortic root aneurysm with severe aortic regurgitation using a composite graft with a 27 mm mechanical bileaflet prosthesis had been performed 5 months earlier.

Transthoracic echocardiography showed partial annulo-aortic disconnection with formation of a pseudoaneurysm and systolic graft compression (fig. 1). The extent of disconnection and pseudoaneurysm formation was further demonstrated by transoesophageal echocardiography (fig. 2 and 3).

Coronary angiography demonstrated dynamic systolic compression of the left main coronary artery within the pseudoaneurysm (fig. 4). The patient did not show any ischaemic symptoms, which can be explained by the fact that coronary flow during diastole, where most myocardial perfusion occurs, was not impaired (fig. 5).

The patient underwent successful reoperation with insertion of a 29 mm Medtronic Freestyle Aortic Root Heart Valve (intraoperative findings are shown in fig. 6). Examination of intraoperative tissue and blood cultures showed the presence of \textit{Propionibacterium acnes}, and prosthetic endocarditis as the underlying cause.

\textsuperscript{1} You can find the videos on http://www.cardiovascmed.ch/for-readers/multimedia/
Pseudoaneurysm formation of the ascending aorta is a well described, but rare, complication after composite graft surgery for combined disorders of the aortic valve and ascending aorta [1]. If this serious complication occurs, graft infection must be suspected. Propionibacterium species are constituents of the normal human skin microflora. They are a very rare cause of endocarditis. A retrospective review revealed only a small number of published cases (70 patients, for 58 of them clinical details available). In 79% of the cases prosthetic material was involved, as was the case in our patient [2].

**Key words:** composite graft; endocarditis; pseudoaneurysm; dynamic coronary compression

**References**
