Stentless aortic valve bioprosthesis infective endocarditis: an unusual clinical presentation

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A 78-year-old man with a stentless aortic valve bioprosthesis implanted two years ago for severe aortic stenosis was referred to our department for congestive heart failure and new aortic insufficiency. His physical examination was unremarkable a few months ago. He had no history of fever or infection. Blood pressure was 110/60 mmHg. A 3/6 diastolic murmur was audible as well as signs of pulmonary edema. Blood samples showed no inflammatory syndrome (leukocytes count: 6800/ml, CRP: 19 UI/l and fibrinogen: 3.3 g/l). Blood cultures were negative.

Transthoracic and transoesophageal echocardiography showed severe intra-prosthetic aortic insufficiency but no vegetation. The regurgitation was due to posterior swing of the prosthesis (figure 1). There was no other valvular disease. Left ventricular ejection fraction was normal. Because of a history of coronary angioplasty, a preoperative coronary angiography was scheduled. An aortic angiography was first performed and showed an anterior aortic abscess not detected by echocardiography. The patient was referred for surgery the following day. The surgeon confirmed the absence of vegetation, the presence of 2 abscesses along the suture lines and the posterior swing of the prosthesis. An aortic valve replacement (stented valve) was performed. Post-operative course was simple.

The clinical presentation is unusual because of the absence of inflammatory markers and negative blood cultures but infective endocarditis remains the most plausible etiology regarding anatomic damages observed. This case also illustrates two important points. Firstly, even transoesophageal echocardiography may underestimate the lesions severity in infective endocarditis. Secondly, endocarditis is a potential complication of stentless as other prosthesis.

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Figure 1. (A) Transoesophageal view (top short axis and bottom long axis views) showing the posterior swing of the prosthesis and the intra-prosthetic regurgitation (large arrows: prosthetic annulus, small arrows: cusps). (B) Aortic abscesses as shown during aortic angiography (left) and (C) in the operating room (right) (arrows)