



## Aortic prosthetic heart valve endocarditis

### *Endocarditis infecciosa sobre prótesis valvular aórtica*

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The case report describes a 62-year-old man with mechanical prosthetic aortic valve implanted in 2014 due to severe bicuspid aortic valve stenosis who had a traffic accident resulting in open fractured pelvis and requiring surgical treatment. On discharge, he showed symptoms of phlebitis related to left upper limb venipuncture, reason why antibiotic treatment was initiated; but presented with fever of 38.5 °C, accompanied by asthenia and general malaise, with edema in the affected limb. A Duplex ultrasound ruled out possible deep venous thrombosis and treatment was readjusted; but symptoms worsened (dyspnea, orthopnea and general deterioration of health) so paired blood culture samples were taken three weeks after the onset of fever; evidencing growth of methicillin-sensitive *Staphylococcus aureus*. Therefore, on suspicion of prosthetic valve endocarditis, his hospital admission was

scheduled. Transthoracic echocardiogram was inconclusive (**Panel A**), but a transesophageal echocardiogram –performed 24 hours later– showed a 20 × 14 mm sessile mass attached to the base of the atrial surface of the anterior mitral leaflet (**Panel B** and **Video 1** [supplementary material]) extending to the aorto-mitral continuity where an echolucent image was observed (**Panel C**) suggestive of abscess and potential fistula by color Doppler sonography (**Panel D** and **Video 2** [supplementary material]). Faced with the diagnosis of prosthetic valve endocarditis with abscess of the mitral-aortic junction and mitral involvement, the patient was transferred to the referral hospital for heart surgery. The diagnosis was confirmed during the surgical procedure and a "Commando" technique for aorto-mitral continuity reconstruction, using bovine pericardial patch, from the fossa ovalis to the mitral-aortic region was performed; and two prostheses, mitral (Carbomedics N° 27) and aortic (Carbomedics N° 23) were placed. The patient had a satisfactory outcome despite his perioperative low cardiac output syndrome and further implantation of a permanent pacemaker.

Although transthoracic echocardiography is the first test of choice, it may be insufficient to diagnose

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infective endocarditis in patients with mechanical prosthetic valves; conversely, the transesophageal technique achieves high sensitivity and specificity.

Aorto-mitral continuity reconstruction is a surgical challenge due to its high complexity, but it is a chance of survival for this type of patient.

