

Image in cardiology

Transcatheter Mitral Valve Replacement in Massive Mitral Calcification

Prótesis transcatóter en calcificación masiva del anillo mitral

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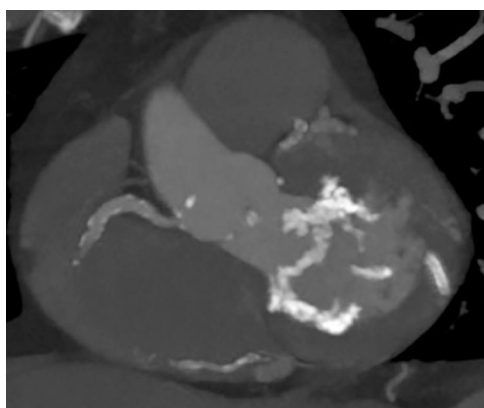


Figure 1.

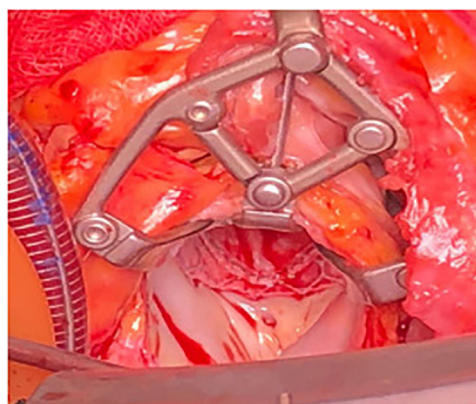


Figure 2.

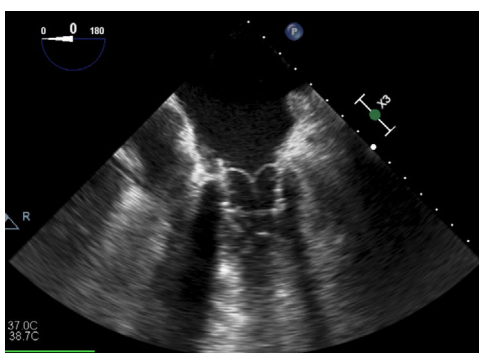


Figure 3.

We present the case of a 76-year-old man who presented with severe symptomatic mitral stenosis with a valve area of 0.7 cm². He had a history of multivessel coronary artery disease for which he had undergone percutaneous revascularization. Computed tomography (Figure 1) showed massive circumferential calcification of the mitral annulus that ruled out implantation of a conventional prosthesis. We therefore decided to implant an expandable transcatheter aortic prosthesis in the mitral position. Computed tomography enabled both appropriate planning of the approach and selection of the valve size.

This is the first case published in Spain of implantation of an Edwards SAPIEN 3 No. 29 transcatheter prosthesis in the mitral position with direct visualization by median sternotomy with extracorporeal circulation and aortic clamping. Once the mitral valve had been exposed, the chordae tendineae of the anterior leaflet were resected and the leaflet everted to avoid obstruction of the left ventricular outflow tract. For orthogonal deployment of the transcatheter prosthesis in the mitral annulus, a 15-mm accessory port was used through the right fourth intercostal space in the midaxillary line, permitting successful implantation (Figure 2). Transesophageal echocardiography (Figure 3) during and after the procedure showed an excellent outcome, with mean transmitral gradient of 3.1 mmHg and mild periprosthetic regurgitation.

In the first 3 months of follow-up, the patient showed no hemolysis and had a favorable clinical outcome. This technique allows surgical treatment of patients with massive calcification of the mitral annulus with lower morbidity and mortality.

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