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Early hypoattenuated leaflet thickening and restricted leaflet motion of a Lotus transcatheter heart valve detected by 4D computed tomography angiography

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An 85-year-old woman with severe aortic stenosis (AVA: 0.7 cm², mean gradient 56 mmHg) underwent transcatheter aortic valve implantation (TAVI) with a 25 mm Lotus™ transcatheter heart valve (Boston Scientific, Marlborough, MA, USA) via a femoral approach. Peri-interventionally, 600 mg clopidogrel, 400 mg aspirin and 5,000 IU heparin were administered. Post implantation the patient received dual antiplatelet therapy with aspirin 100 mg and clopidogrel 75 mg and heparin 7,500 IU bid.

To check the sizing and positioning of the valve, 4D computed tomography angiography (CTA) was carried out on day four which showed hypoattenuated thickening of the left prosthesis leaflet **(Figure 1A-Figure 1C)** and restricted leaflet motion **(Figure 1A, Figure 1B, Moving image 1)**. Transthoracic echocardiography revealed a mean pressure gradient of 9 mmHg and, taking into account prosthesis-related shadowing, no signs of impaired leaflet motion.

The patient received modified antithrombotic therapy with clopidogrel/phenprocoumon (target INR 2.0 to 2.5). Follow-up CTA (day 74) showed almost complete resolution of the thickening, suggesting a thrombotic origin **(Figure 1D-Figure 1F)**. However, we cannot rule out other potential causes which warrant further investigation.

Conflict of interest statement

The authors have no conflicts of interest to declare.

Online data supplement

Moving image 1. 4D CTA video.

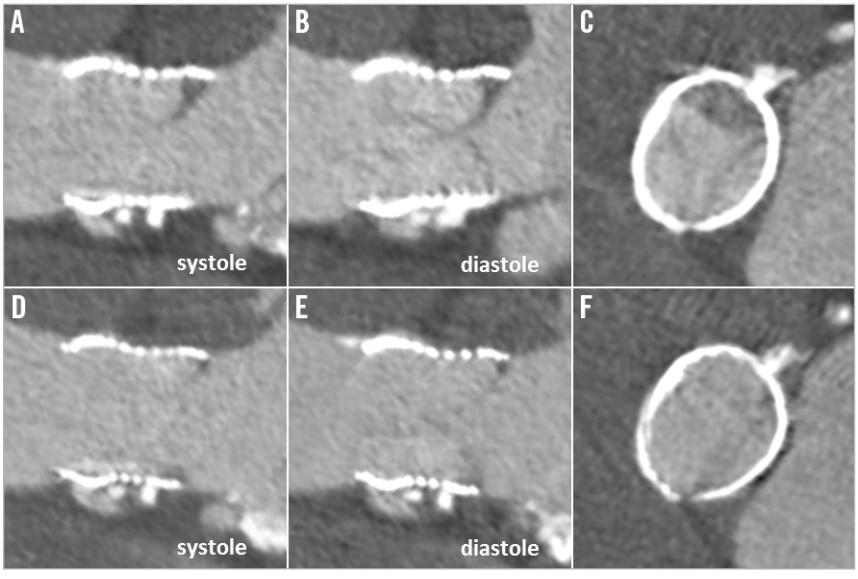

Figure 1. *4D computed tomography angiography. 4D CTA on day 4 (A-C); 4D CTA on day 74 (D-F).*

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