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What happens when a patient's aorta falls off?

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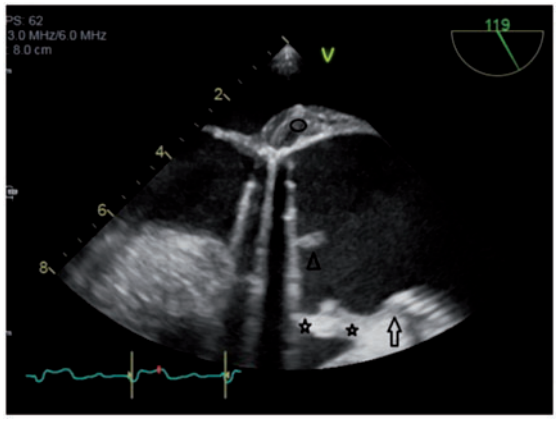

Figure 1 Initial transoesophageal echocardiogram demonstrating an uncertain aortic contour. Arrow—bottom end of tube graft. Stars—'2' sinuses of Valsalva. The one closest to the aortic valve proved to be a false aneurysm. Arrowhead—aortic valve vegetation. Oval—soft tissue aortic root thickening.

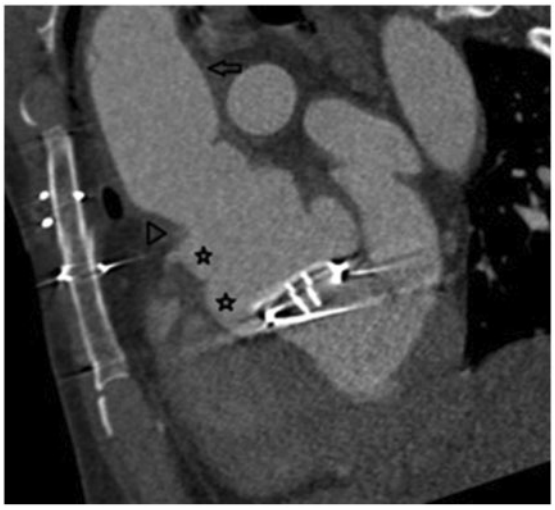

Figure 2 Reconstructed long-axis computed tomography image of the aortic root. Stars indicate the possible sinuses of Valsalva. The one closest to the aortic valve was the false aneurysm. Arrow head shows the proximal suture line of the ascending aortic interposition graft (arrow).

A 41-year-old man presented to a District General Hospital after collapsing three times at home. He had experienced headaches, double vision, and fever in the prior week. On admission, the patient had a temperature of 38.7, a blood pressure of 102/61, and a heart rate of 97; a systo-diastolic murmur was heard on auscultation. His C-reactive protein was 275 (normal < 5); the full blood count, urea and electrolytes, and liver function blood tests were normal. Blood cultures were positive for *Streptococcus oralis*.

The patient had a dental abscess 1 week before the symptoms started. Three years previously, the patient had infective endocarditis and subsequently had his native bicuspid aortic valve replaced with a mechanical aortic valve. An ascending aortic replacement was also performed at the same time, due to dilatation.

A transoesophageal echocardiogram (TOE) was performed which showed a large vegetation on the aortic valve replacement and suspicion of an aortic root abscess adjacent to the non-facing sinus (*Figure 1*). The anatomy was considered indeterminate on TOE.

A computed tomogram (CT) was initially turned down as it was thought it would not be diagnostic because of artefact from the aortic valve replacement. The patient was transferred to a tertiary hospital and an electrocardiographically gated CT aortic angiogram was performed. This showed near complete dehiscence of the aortic valve from the native aortic root with a large false aneurysm mimicking a

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second aortic root (*Figure 2*). The coronary origins into the native aortic root and the proximal suture line of the ascending aortic replacement allowed for correct interpretation of the anatomy.

The patient was taken to theatre for emergency revision surgery. The aortic graft was incised and the root exposed. Direct visualization confirmed rupture of the left sinus and an abscess associated with the right and non-facing sinuses.

The previously inserted aortic graft was removed as well as the abscess, aortic valve and root below the coronary arteries.

A short homograft was inserted into the left ventricular outflow tract and a prosthetic valve inserted inside. The distal end of the homograft was sutured to a small residual amount of native aortic root that included the coronary arteries. The distal margin of this was then sutured to a new ascending aortic graft.

Postoperatively the patient required implantation of a dual chamber permanent pacemaker and was eventually discharged from hospital 1 month after his emergency surgery. He recovered well at home and remains well on long-term follow-up.

Consent: The author/s confirm that written consent for submission and publication of this case report including image(s) and associated text has been obtained from the patient in line with COPE guidance.

Conflict of interest: none declared.