

Left Valsalva aneurysm as acute ischaemia of the left main trunk: a case report

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Received 19 August 2021; first decision 27 September 2021; accepted 19 November 2021; online publish-ahead-of-print 9 December 2021

A 79-year-old woman was brought to the emergency room with chest pain. She had undergone a clipping surgery for an unruptured cerebral aneurysm 5 years earlier. She had a history of hypertension for more than 30 years, but no history of diabetes, dyslipidaemia, or smoking. An electrocardiogram showed an ST depression in the II, III, aVf, and V3–V6 leads, and slight ST elevation in aVR (Figure 1A). Echocardiography showed severe hypokinesia of the left ventricle, and emergency coronary

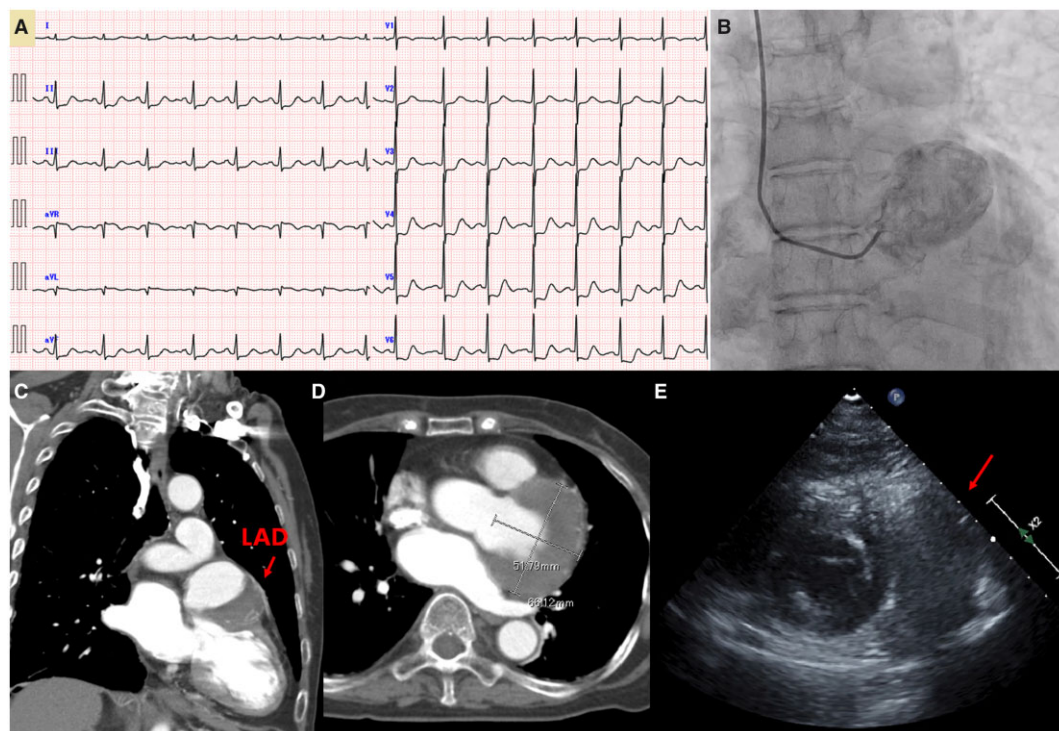


Figure 1 (A) Electrocardiogram recorded on arrival. (B) Mass-like accumulation of contrast was observed in ascending aorta when the contrast medium was injected. (C and D) Left anterior descending artery compressed by large left Valsalva aneurysm demonstrated by computed tomography. (E) Postoperative echocardiographic image of a patched aneurysm, short-axis view.

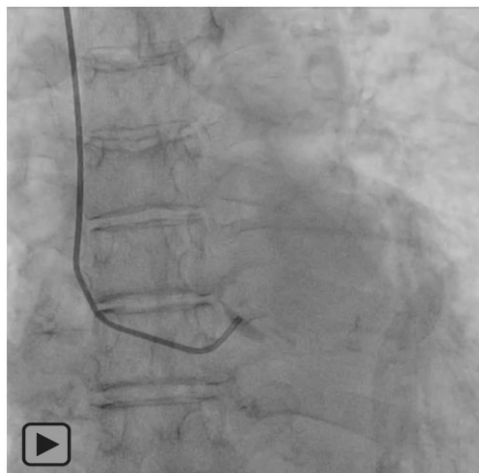
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Handling Editor: Massimo Mapelli

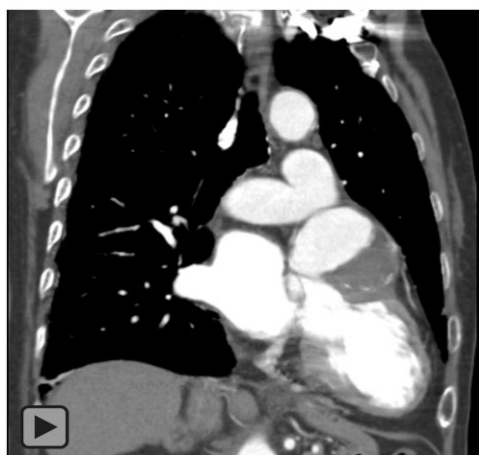
Peer-reviewers: Stefano Nistri; Edin Begic

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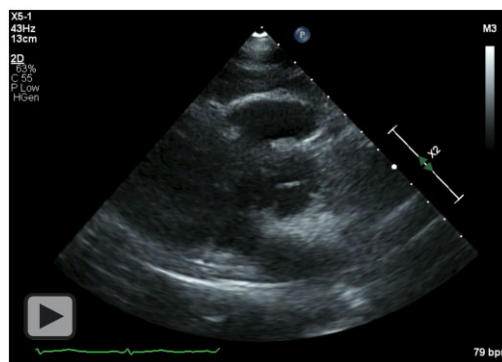


Video 1 Findings of contrast administration through a catheter in the ascending aorta.



Video 2 Large Valsalva aneurysm revealed by computed tomography.

angiography (CAG) was performed. Blood tests on arrival showed an elevated troponin I (231.1 pg/mL). However, creatine phosphokinase (CPK) (73 U/L) and CPK-MB (6 U/L) were not elevated. During CAG, it was difficult to engage the left coronary artery. When contrast medium was injected into the aorta, a mass-like accumulation of contrast was observed (Figure 1B, Video 1). The examination was immediately stopped, and contrast-enhanced computed tomography was performed. Computed tomography showed an aneurysm with a maximum diameter of approximately 6.6 cm in the left sinus of Valsalva, which was compressing the left coronary artery (Figure 1C and D, Video 2). Emergency surgery, patch closure of the aneurysm, and bypass surgery from the left internal thoracic artery to the left



Video 3 Postoperative echocardiography, long-axis view.

anterior descending artery was performed. After surgery, the patient gradually recovered with continued rehabilitation and was discharged. After ruling out other diseases and infections, Takayasu's arteritis was considered to be the underlying disease.

According to the literature, the causes of Valsalva aneurysms include congenital factors, such as Marfan's syndrome and Ehlers-Danlos syndrome, and secondary factors, such as syphilis and infective endocarditis.^{1,2} Takayasu's arteritis has also been reported as a secondary underlying disease.³ In the postoperative echocardiogram, it was difficult to detect an obvious aortic abnormality in long-axis view, but an aortic aneurysm was clearly visible in the short-axis view. (Figure 1E, Video 3 and Supplementary material online, Video S1). When ischaemia of the left main trunk is suspected, it is considered important to differentiate secondary factors including left Valsalva aneurysm before performing CAG, to which echocardiography could be an important clue. However, long-axis view usually depicts right and non-coronary cusps, and it is necessary to rotate the probe to observe the left coronary cusp.

Supplementary material

Supplementary material is available at *European Heart Journal - Case Reports* online.

Consent: The authors confirm that written consent for submission and publication of this case report including images and associated text has been obtained from the patient in line with COPE guidance.

Conflict of interest: None declared

Funding: None declared.

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