

Acute myocardial infarction caused by aortic dissection manifesting as mobile mass in ascending aorta: a case report

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A 78-year-old woman suffered sudden chest pain at 2 a.m., though she endured the symptoms and was transported to the emergency room 6 h later. The blood pressure on the right and left arm was 108/62 and 100/54 mmHg, respectively. An electrocardiogram demonstrated complete atrioventricular block, abnormal Q wave, and ST elevation in II, III, and aVF leads, suggesting an acute inferior myocardial infarction (MI) (Supplementary material online, Figure S1). Emergency coronary angiography was considered; however, an echocardiography revealed a large mass in the ascending aorta, moving distally in systole and retracting into the coronary cusp in diastole, accompanied by severe hypokinesis of inferior wall and right ventricle (Figure 1; Videos 1 and 2). Since it was assumed that the mass in the ascending aorta was obstructing the coronary blood flow, contrast-

enhanced computed tomography (CT) was immediately performed instead of coronary angiography. The CT scan showed a Stanford type A aortic dissection (AD), with a pseudo-lumen opening. The inferior part of the pseudo-lumen was occluded by a thrombus, consistent with the mass visualized on echocardiography (Figure 2; Video 3). On laboratory tests, D-dimer levels were markedly elevated (505 µg/dL), and CK and CKMB elevated (440 U/L and 69 U/L, respectively). Emergency surgery was performed, revealing that the thrombus in the false lumen obstructed the right coronary artery (RCA); RCA flow was restored by removing the thrombus. After the operation, the patient underwent rehabilitation and was discharged.

According to the literature, coronary malperfusion occurs in 6–11% of type A AD cases,^{1,2} and the prognosis is worse when AD is

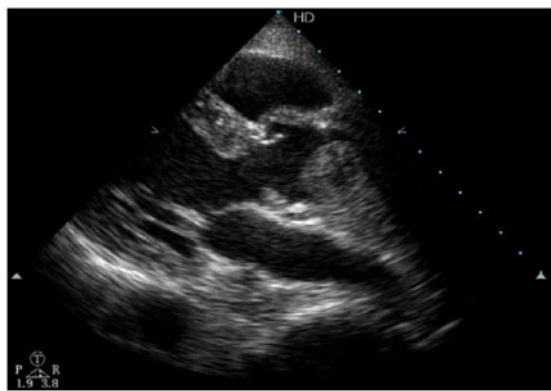
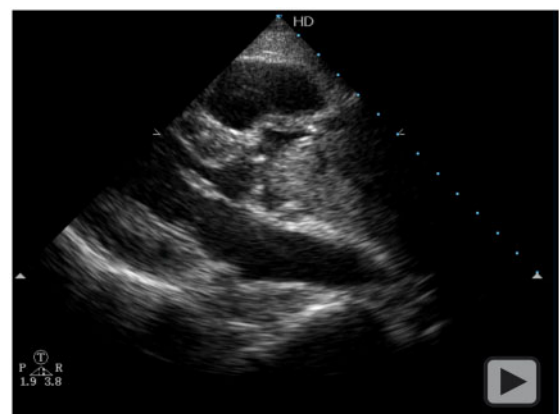


Figure 1 Echocardiography showed the large mass in ascending aorta.



Video 1 Echocardiographic image of a mobile mass in the ascending aorta.

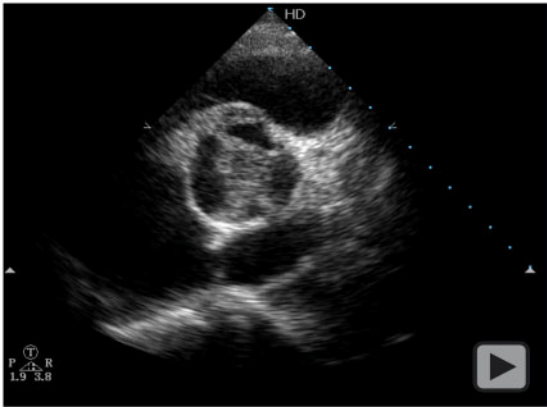
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Video 2 Short axis image of the mass.



Video 3 CT findings of the aorta and coronary arteries.



Figure 2 A contrast-enhanced computed tomography scan showed the ostium of right coronary artery was obstructed by the false lumen thrombus.

complicated with coronary malperfusion.² It is important to differentiate between a usual MI and coronary malperfusion due to AD, and echocardiography is a useful modality because it can diagnose AD with high sensitivity³ and can be performed quickly.

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.

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