Mobile complex atherosclerotic aortic plaque

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DESCRIPTION

A 64-year-old man with a history of paroxysmal atrial fibrillation (AF) and transient ischaemic attack was admitted with complaints of palpitations and fatigue. He was found to be having AF with sustained rapid ventricular response. He had failed rate control therapy with calcium channel blockers and antiarrhythmic therapy (dronedarone), and was on dabigatran for anticoagulation. Prior to undergoing direct current cardioversion, he underwent a transoesophageal echocardiogram (TEE) to rule out left atrial appendage (LAA) thrombus which revealed a large, complex atherosclerotic plaque (size 0.5 cm) in the aortic arch extending into the descending thoracic aorta with several highly mobile lesions attached to the plaque (largest size 0.96 cm) (figures 1 and 2; videos 1 and 2). There was no LAA thrombus and the patient was successfully cardioverted to sinus rhythm and started on simvastatin.

Aortic arch atheroma is a strong risk factor for atheroembolic stroke. Despite antiplatelet therapy, it carries a risk of recurrent strokes, as high as 11% at 1 year.¹ In particular, plaques 4 mm or greater in thickness proximal to the origin of the left subclavian artery are found in one-third of patients with otherwise unexplained stroke.² TEE can provide information regarding plaque composition, mobility, ulceration as well as anatomic relationship of the plaque to the origin of the great vessels with excellent intraobserver and interobserver reproducibility. Treatment with a statin is a reasonable option for patients with aortic arch atheroma to reduce the risk of stroke.³ Oral anticoagulation therapy may be considered in stroke patients with aortic arch atheroma 4 mm or greater to prevent recurrent strokes.⁴

Figure 2 Long-axis view of the aortic arch showing a complex plaque on transoesophageal echocardiography.

video 1 Short-axis echocardiographic view of the aortic arch showing a large complex plaque on transoesophageal echocardiography. One large mobile atheroma is seen attached to the plaque.

Figure 1 Short-axis view of the aortic arch showing a large complex plaque on transoesophageal echocardiography. One large mobile lesion is seen attached to the plaque.

video 2 Long-axis echocardiographic view of the aortic arch showing a large, complex plaque on transoesophageal echocardiography. One large mobile atheroma is seen attached to the plaque.

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Learning points

- ▶ Aortic arch atheroma is a strong risk factor for atheroembolic stroke and peripheral thromboembolism. The risk remains very high despite antiplatelet therapy.
- ▶ Oral anticoagulation may be considered in stroke patients with aortic arch atheroma (size 4 mm or greater), to prevent recurrent strokes.

Competing interests None.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

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