Pedunculated mobile aortic arch thrombus as a cause for acute stroke

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DESCRIPTION

A 69-year-old man presented with sudden-onset dysphasia and right hemiparesis. MRI of the brain revealed an acute left frontoparietal infarct ([figure 1](#)). Carotid Dopplers were normal and ECG showed sinus rhythm. Transthoracic echocardiogram (TTE) revealed a highly mobile 1.33 cm echogenic mass attached to the superior surface of the aortic arch ([figure 2](#)). Subsequent transoesophageal echocardiogram (TOE) did not identify a left atrial appendage thrombus or patent foramen ovale. The patient was started on intravenous heparin prior to warfarin. Given the high-risk nature of the procedure and patient preference, peripheral embolectomy was not pursued. Repeat TTE revealed almost complete resolution at week 6 with no further acute events.

Although extremely rare, aortic arch thrombi are recognised as a cause of systemic emboli. The wall opposite the ostia of the aortic arch has the highest

prevalence of thrombi, with the insertion site, usually a small atherosclerotic plaque, typified by increased mural echo density.¹ TOE is widely reported as the most sensitive investigation, however, as in our case, TTE may be sufficient. Echocardiography allows assessment of the size, mobility and profile of the insertion site, which can guide treatment.² Optimal treatment has yet to be defined. Definitive treatment may be undertaken via surgical removal, balloon embolectomy and thrombolysis.³ Anticoagulation, while removing the surgical risk, may result in recurrent distal embolisation. Close monitoring of international normalised ratio and follow-up TTE or TOE is required; resolution has been documented with thrombi sized 0.5–3 cm.

Figure 1 Increased signal intensity seen in the left frontoparietal region on T2 sequences, consistent with an acute infarct.

Learning points

- ▶ In patients with unexplained systemic embolism, aortic arch thrombus must be considered as a potential cause.
- ▶ Transthoracic echocardiogram and transoesophageal echocardiogram are important non-invasive tests to identify aortic arch thrombi.

Competing interests None declared.

Patient consent Obtained.

Provenance and peer review Not commissioned; externally peer reviewed.

Figure 2 Mobile aortic arch thrombus identified using transthoracic echocardiography.

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