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## Letter to the Editor: New Observation

# Cardioembolic Free-Floating Thrombus in the Common Carotid Artery

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A 92-year-old right-handed female presented to the emergency department after a transient episode of expressive aphasia. Noncontrast CT head showed no early ischemic signs. CT angiogram of the head and neck revealed a free-floating thrombus (FFT) at the left carotid bifurcation occluding the proximal segment of the left external carotid artery with a component protruding into the lumen of the proximal left internal carotid artery, with no underlying atherosclerotic disease (Figure 1A–C). Electrocardiogram captured previously undiagnosed atrial fibrillation. MRI brain showed multiple small acute infarcts scattered throughout the *right* MCA territory (Figure 2), but none in the left hemisphere. She was not a candidate for tPa or thrombectomy at the time of presentation as her deficits had nearly resolved (NIHSS 1). Further, the FFT discovered in the left carotid bifurcation was subocclusive with no evident underlying stenosis. The FFT resolved after 10 days of anticoagulation (Figure 1D). Treatment was initiated with therapeutic enoxaparin,

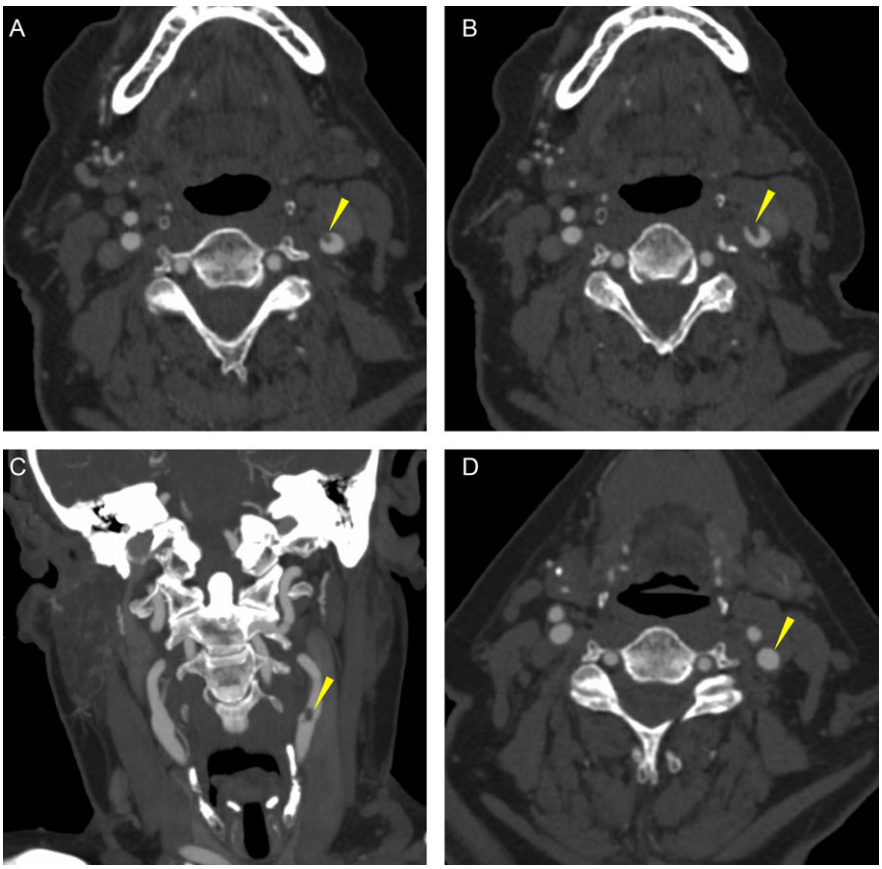


**Figure 1:** (A) Axial view of a CT angiogram of the head and neck demonstrating an intraluminal filling defect at the left carotid bifurcation occluding the proximal segment of the left external carotid artery with a component protruding into the lumen of the proximal left internal carotid artery (arrow), suggestive of an FFT. (B) The same FFT viewed on a slightly more caudal slice (arrow) and (C) in a coronal view (arrow). (D) Interval resolution of the FFT after 10 days of anticoagulation (arrow).

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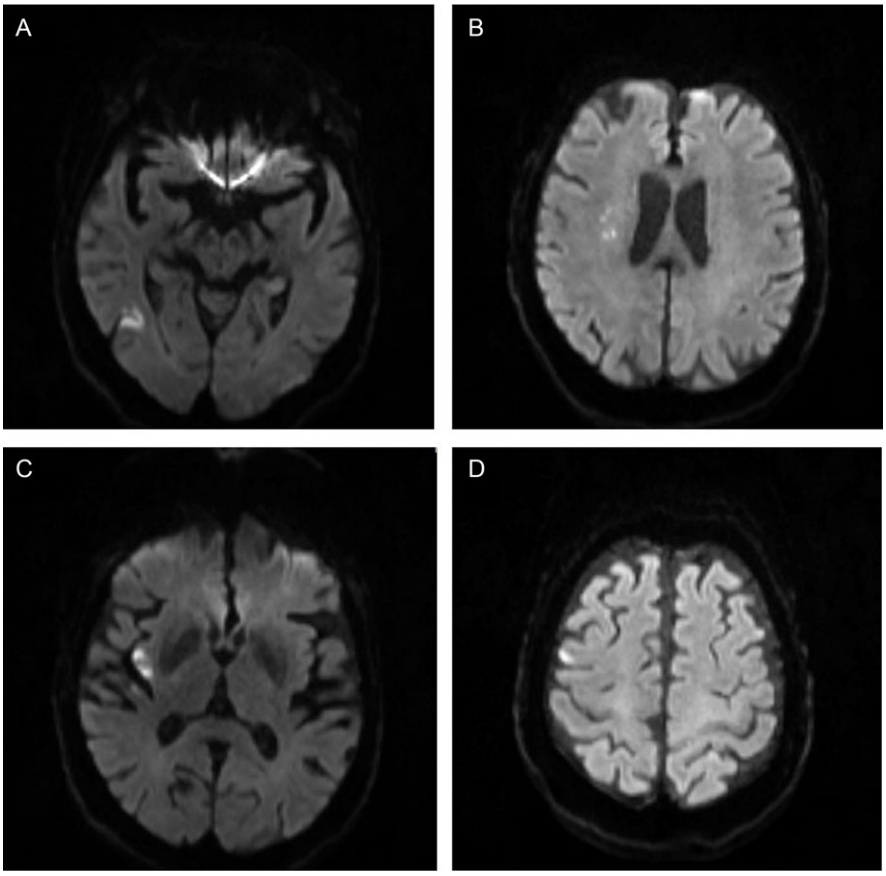


**Figure 2:** (A–D) Axial view of an MRI Brain showing multiple areas of focal diffusion restriction in the right MCA territory.

which was chosen over IV heparin due to the low risk of hemorrhagic transformation given the minimal infarct burden. One day later, she was transitioned to dabigatran (age-adjusted dosing – 110 mg orally twice daily) as she was suitable for discharge home with close outpatient follow-up. Dabigatran was chosen due to the availability of a reversal agent. A DOAC was used instead of warfarin given improved convenience and equivalent efficacy. Following the initiation of anticoagulation, there were no further focal neurologic deficits suggestive of nonhemorrhagic worsening via distal embolization of the FFT. The patient returned to her clinical baseline and had no subsequent focal neurologic deficits at discharge or follow-up.

This case supports the concept of a cardioembolic FFT in the carotid system.[1] The patient presented with a transient ischemic attack characterized by acute aphasia which clinically localizes to the left hemisphere, and neuroimaging demonstrated evidence of concomitant asymptomatic right hemispheric multifocal acute ischemic strokes. Taken together, the presence of bihemispheric multifocal localizations in the context of newly captured atrial fibrillation and absence of significant carotid artery atherosclerosis strongly supports a central cardioembolic source. This case is both novel and clinically relevant as, from prior reports,[1] most carotid FFTs originate from carotid atherosclerotic disease, either via local plaque rupture or distal atheroembolism. This case demonstrates that carotid FFTs can originate from a central cardioembolic source and therefore necessitate a cardioembolic work-up, especially when there is minimal angiographic evidence of carotid atherosclerotic disease.

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