Teaching Neuro*Image*

Stroke due to calcific embolus following coronary angiography

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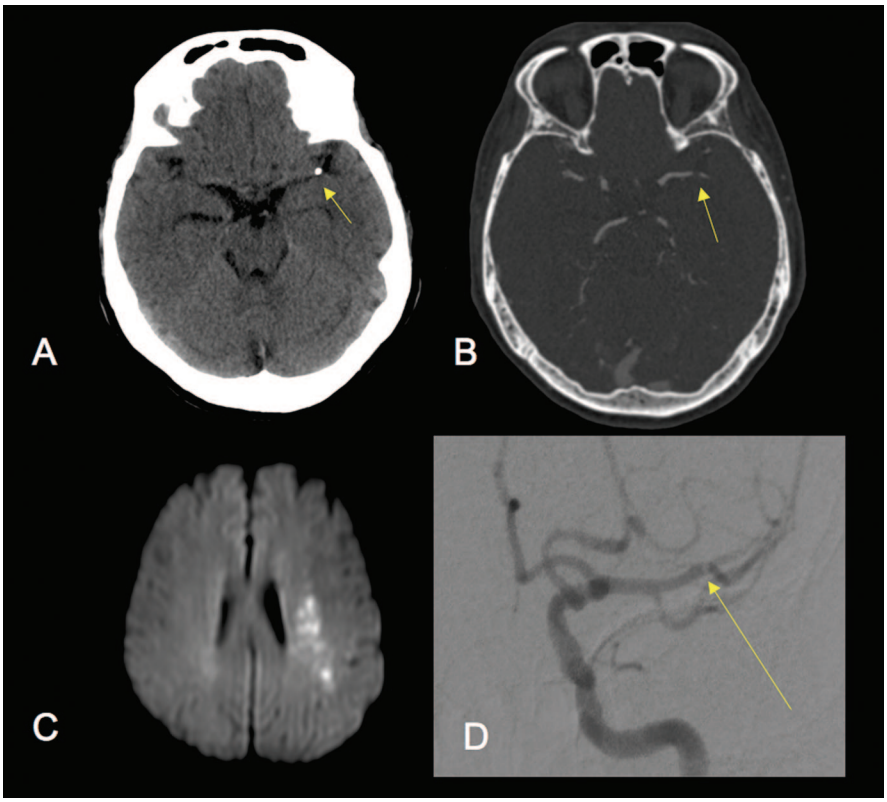

Figure. (A) Noncontrast CT scan of the head showing a calcified embolus within the left middle cerebral artery (MCA). (B) CT angiography showing the calcified embolus with poor distal flow. (C) Diffusion-weighted MRI shows the acute ischemic lesion in the left MCA territory. (D) Digital subtraction angiography showing the calcific embolus in the distal M1 with delayed filling in the superior division of MCA.

A 70-year-old right-handed, hypertensive woman underwent coronary angiography 5 days after a non-ST segment elevation myocardial infarction. Angiography showed a 90% narrowing of the left anterior descending artery. Toward the end of the procedure, she experienced fluctuating expressive dysphasia and mild right arm weakness. Head CT showed a calcific embolus in the left middle cerebral artery (figure, A, B). She stabilized with antiplatelet therapy and IV heparin but worsened the following day with global aphasia and right hemiplegia (figure, C). Surgical and endovascular embolectomy was considered (figure, D), but she developed anterior wall myocardial infarction with left ventricular failure and was treated conservatively. With normal cardiac valves on echocardiography, the calcific embolus probably originated from aortic plaque. Although the incidence of this complication is unknown, spontaneous embolization of calcific material commonly arises from calcific aortic or mitral valves.[1,2]

References

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2. Halloran JI, Bekevac I. Unsuccessful tissue plasminogen activator treatment of acute stroke caused by a calcific embolus. J Neuroimaging 2004;14:385–387.

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