

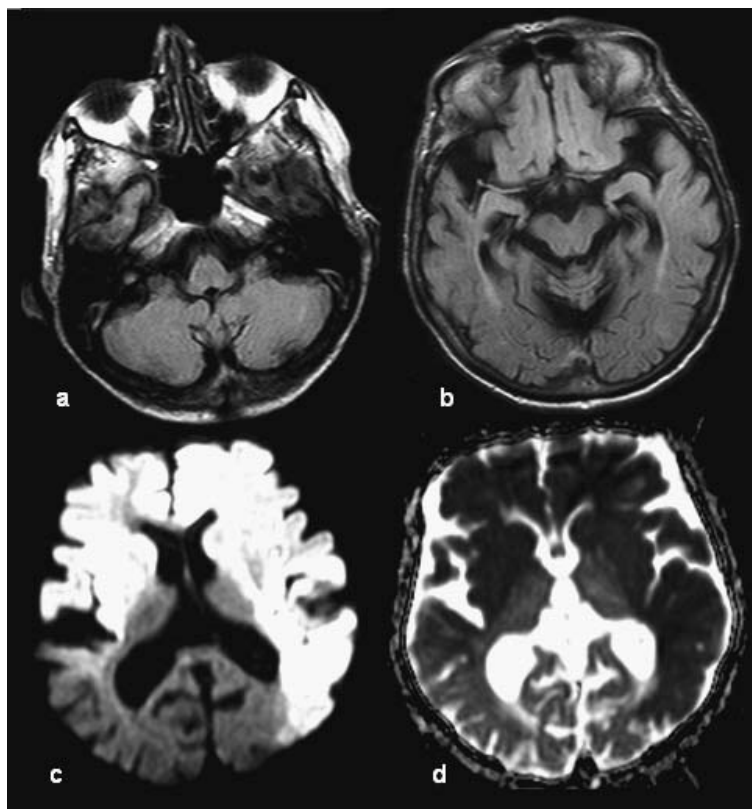
Bilateral Acute Internal Carotid Artery Occlusion Presenting with Sudden Coma

Ebru Bekircan¹, Kader Karli Oguz² and Mehmet Akif Topcuoglu¹

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Picture. Brain fluid-attenuated inversion recovery sequences of MR imaging showed hyperintensity consistent with vessel occlusion and/or significantly slow flow through both petrous portions of the internal carotid arteries (a) and both middle cerebral arteries (b). Diffusion-weighted MR image (c) and corresponding apparent diffusion coefficient map (d) indicated acute infarction involving near-whole territory of the bilateral anterior and middle cerebral arteries. It is notable that possibly due to the watershed shift reflecting the chronic nature of occlusion, the size of the infarction is smaller on the right compared to the left side.

A 91-year-old woman with atrial fibrillation (AF) was brought to the emergency unit because of sudden development of coma. Neurological examination revealed decerebra-

tion posturing and bilateral Babinski signs along with intact brainstem functions. Brain magnetic resonance (MR) imaging demonstrated extensive infarctions encompassing com-

¹Department of Neurology, Hacettepe University Hospitals, Ankara, Turkey and ²Department of Radiology, Hacettepe University Hospitals, Ankara, Turkey

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Correspondence to Dr. Mehmet Akif Topcuoglu, matopcuoglu@yahoo.com

plete territory of the anterior and middle cerebral arteries bilaterally (Picture). Cervical ultrasound, obtained just after MR imaging, showed a chronic atheromatous occlusion in the cervical portion of the right internal carotid artery (ICA). Transcranial ultrasound disclosed the absence of flow in the terminal (T) segment of left ICA. Based on these sonographic studies, an acute left ICA T-occlusion possibly due to AF-related cardioembolism, resulting in near com-

plete cessation of anterior cerebral circulation was diagnosed. No heroic measure was pursued, and she died peacefully. Acute bilateral ICA occlusion presents with coma, quadriplegia, and decerebrate rigidity (1). It can initially be misdiagnosed as severe brainstem stroke or metabolic encephalopathy. However, the presence of brainstem reflexes at admission and timely-performed diffusion MR imaging provides the information for appropriate differentiation.

Reference

1. Fisher CM. Occlusion of the carotid arteries: further experiences. *Arch Neurol Psychiatry* **72**: 187-204, 1954.

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