

Neurological Bulletin

Volume 1 | Issue 1

Article 7

October 2009

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Recommended Citation

Goddeau RP. A Carotid Stroke in the Occipital Lobe. *Neurological Bulletin* 2009;1:29-30,
http://dx.doi.org/10.7191/neurol_bull.2009.1006

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NEUROLOGICAL BULLETIN

FEATURING ARTICLES BY TRAINEES IN NEUROLOGY & NEUROSCIENCE

A Carotid Stroke in the Occipital Lobe

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A 24 year old man with a history of inflammatory bowel disease presented to the emergency department after collapsing several hours earlier that day. He was found to be stuporous, nonverbal, following no commands but opened his eyes to tactile stimuli. An oculo-sympathetic palsy on the left, a suspected right homonymous hemianopia, and a spastic hemiparesis with Babinski response on the right were found on exam.

Emergent MRI revealed restricted diffusion in the left internal capsule, putamen, medial temporal and occipital lobes but largely sparing the thalamus, lateral temporal and parietal lobes. MRA of the neck revealed classic “flame-shaped” flow-related signal terminating abruptly after the origin of the left internal carotid artery (Figure 1).

Left vertebral injection on digital subtraction angiography showed absent left posterior cerebral artery (Figure 2) indicating the persistence of its fetal origin directly from the internal carotid artery. Ten to 30% of people harbor a fetal origin to the posterior cerebral artery, highlighting the variability of at risk tissue with dissections of the “anterior” circulation.^{1,2,3} Deciphering whether a cerebral

lesion is due to an arterial cause requires cognizance of this not uncommon variant.

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Disclosure: the author reports no conflicts of interest.

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Keywords: carotid dissection, anomalous cerebral circulation

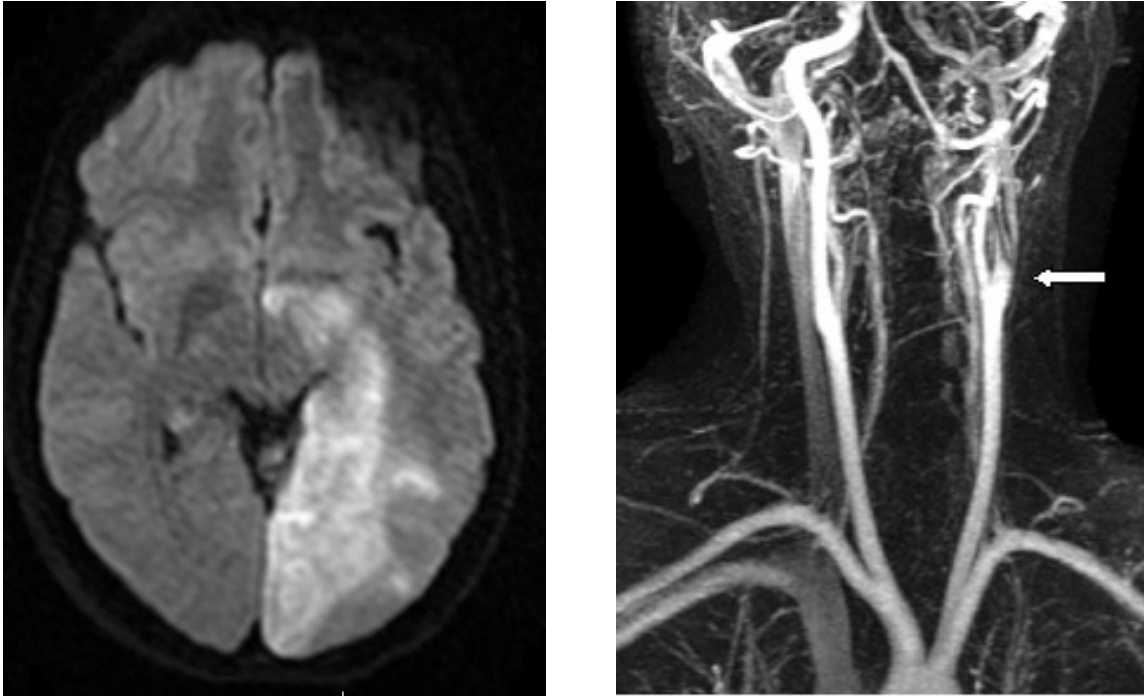


Figure 1: Left panel shows DWI sequence of acute MRI brain. Right panel shows gadolinium-enhanced MR angiography of neck demonstrating left internal carotid dissection.

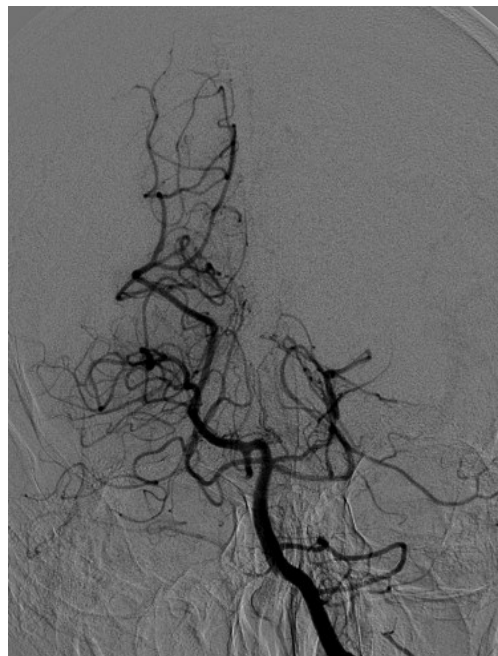


Figure 2: Left vertebral injection on digital subtraction angiography showing non-filling of left posterior cerebral artery.