Case Report

Internal Carotid Artery Occlusion Causing Acute Cranial Neuropathies

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A 54-year-old male with a history of left posterior parietal ischemic stroke, epilepsy, tobacco and marijuana smoking, and alcohol abuse, presented with acute left visual loss and diplopia. On examination, he had reduced left visual acuity and a left oculomotor nerve palsy. CT angiogram from aortic arch to circle of Willis identified extensive thrombus occluding the left common and internal carotid arteries, extending to the left ophthalmic artery. This case demonstrates acute visual loss from ophthalmic artery occlusion, and left oculomotor nerve palsy from occlusion of the inferolateral trunk of the internal carotid artery (cavernous sinus portion).
Key Words: Stroke—visual loss—ophthalmoplegia—CT—cranial nerve

Case Report

A 54-year-old male was admitted with acute onset painful left visual loss and diplopia, beyond the time limit for acute intervention. He had a past history of left parietal ischemic stroke, epilepsy, nicotine, alcohol, and cannabis dependence. On examination, he had reduced left visual acuity, left ptosis, pupillary dilatation with minimal reactivity to light, and impaired adduction and depression of the left eye. These signs were consistent with left optic and oculomotor nerve palsy. CT angiogram of aortic arch to circle of Willis identified extensive thrombus occluding the left common and internal carotid arteries, extending to the left ophthalmic artery (Fig 1). Investigations excluded vasculitic and prothrombotic disorders. He was commenced on antiplatelet therapy and secondary stroke prevention, as he was noncompliant with medications after his previous stroke. This case demonstrates a rare presentation of acute visual loss from anterior ischemic optic neuropathy secondary to ophthalmic artery occlusion, and left oculomotor nerve palsy from occlusion of the inferolateral trunk of the internal carotid artery (cavernous sinus portion).[1] The recognition of acute optic and oculomotor nerve palsy as a sign of acute internal carotid artery occlusion is important, as urgent vascular imaging is paramount for the diagnosis and acute management of ischemic stroke and prevention of further neurological deficit.

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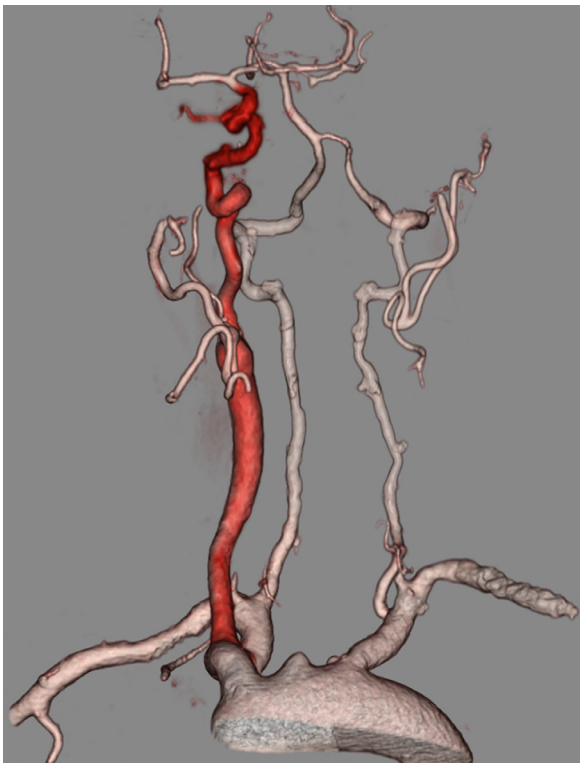

Figure 1. *Reconstructed 3D image of CT angiogram identifying enhancement of right common carotid artery, right internal carotid artery, and right ophthalmic artery (colored red), but no enhancement on the contralateral side due to complete occlusion.*

3D reconstruction of CT angiogram aortic arch to circle of Willis. (Color version of figure is available online.)

Reference

1. Morán-Sánchez JC, Gómez-Estévez I, El Berdei Y, et al. Double or nothing: red flag symptoms of critical carotid stenosis, a case report. BMC Neurol 2017;17:69.