



Common Carotid Artery Occlusion With Patent Internal and External Carotid Arteries: Evaluation With Duplex Sonography

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Common carotid artery (CCA) occlusion is usually associated with occlusion of the ipsilateral internal carotid artery (ICA), the external carotid artery (ECA), or both. However, the ICA and ECA may be occasionally patent in case of CCA occlusion.

A 61-year-old man with hypertension and diabetes was referred to our hospital because of repetitive transient left hemiparesis. Intracranial MR angiography was normal. The color flow Doppler imaging and spectral analysis demonstrated complete occlusion of the right CCA. A detailed sonographic study revealed antegrade flow in the right ICA and retrograde flow in the ECA. An angiogram of the aortic arch showed complete occlusion of the right CCA. No initial filling of the ipsilateral ICA or ECA was identified. However, delayed subtraction images did show collateral flow and opacification of the ipsilateral ICA.

Duplex sonography, particularly with color-coded flow imaging, facilitates interpretation in patients with CCA occlusion and a patent ICA by providing an easily visualized roadmap of vascular flow.