Persistent hypoglossal artery

Arnold C. Merrow

Received: 1 May 2010 / Revised: 13 June 2010 / Accepted: 21 June 2010 / Published online: 31 July 2010
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A 7-year-old girl underwent brain MRI and MRA for headaches. The MRA demonstrated an anomalous artery coursing through the right hypoglossal canal (Fig. 1, *arrow*) to form the basilar artery with a hypoplastic left vertebral artery (*arrowhead*). No right vertebral artery was seen. T1-W images obtained below the MRA slab showed the flow void of this anomalous vessel originating from the right cervical internal carotid artery (Fig. 2, *asterisk*), confirming a persistent hypoglossal artery.

Of the four primitive carotid-basilar anastomoses that normally regress in utero, the hypoglossal artery is the

Fig. 1 Axial source image from 3D-TOF MRA

Fig. 2 Axial T1-W MRI

second most likely (after the trigeminal artery) to persist postnatally (0.03–0.26% of patients) [1]. The vertebral and posterior communicating arteries are frequently absent or hypoplastic with the carotid of origin therefore mainly supplying the brainstem [2]. While typically incidental in the pediatric population, consideration should be given to this artery in skull base surgery, Wada testing and carotid injuries or interventions [1].

References

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A. C. Merrow (✉)
Department of Radiology, Children's Hospital of Alabama,
1600 7th Ave. South, Suite 306,
Birmingham, AL 35233, USA
e-mail: acmerrow05@yahoo.com