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Purpose
To report the MR imaging findings encountered in a case of congenital bilateral aplasia of the internal carotid arteries presenting with trigeminal neuralgia.

Materials & Methods
Case report with clinical and radiologic observations.

Results
A 45-year-old deaf female presented with symptoms of unilateral trigeminal neuralgia. MR imaging of the brain and MR angiography demonstrated absent flow in the internal carotid arteries proximal to the posterior communicating arteries in the region of apparently aplastic carotid canals, asymmetric vertebrobasilar tortuosity on the symptomatic side, and unusual prominence of Meckel’s caves bilaterally.

Conclusion
Congenital bilateral aplasia of the internal carotid arteries is a rare anomaly that has been associated with intracranial aneurysms and megadolicho-basilar anomaly. Unique findings on MR imaging and MR angiography which may allow diagnosis include absence of flow in the internal carotid distribution proximal to the posterior communicating arteries, vertebrobasilar enlargement with large posterior communicating arteries, unusually prominent Meckel’s caves and absent carotid canals. In our case the vascular physiology produced the clinical syndrome of trigeminal neuralgia related to vascular compression by enlarged vertebrobasilar vessels.

References