



Vertebrobasilar Dolichoectasia Resulting in Displacement of the Cervicomedullary Junction

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A man in his 60s presented with a 6-month history of progressive gait instability, changes in speech, and dysequilibrium. Neurologic examination revealed an ataxic dysarthria, reduced palate elevation on the right, and marked truncal ataxia with postural instability. Magnetic resonance imaging of the brain revealed a dolichoectatic right-dominant vertebrobasilar system with mass effect resulting in flattening of the ventral medulla and displacement of the cervicomedullary junction (Figure). Extensive evaluation to explore genetic, infectious, inflammatory, metabolic, and neurodegenerative causes of progressive ataxia was unrevealing. The patient subsequently underwent right suboccipital craniotomy, C1 laminectomy, and mobilization of the vertebral artery with a sling against the petrous bone dura. At 1

month postoperation, he had moderate symptomatic improvement but still required the assistance of a gait aid.

Vertebrobasilar dolichoectasia is a well-described phenomenon thought to be associated with hypertension and resultant vascular wall damage.¹ Some patients are asymptomatic, whereas others may have symptomatic brain stem compression, hydrocephalus, posterior circulation ischemia, or lethal hemorrhage. Similar cases of progressive ataxia secondary to medullary compression have been reported previously, although this presentation is rare.² We hypothesize that in this case, the associated cerebellar ataxia could be related to transmitted mechanical pressure on the vermis and inferior cerebellar peduncle. Regarding management of intracranial dolichoectasia, there are no published guidelines in the

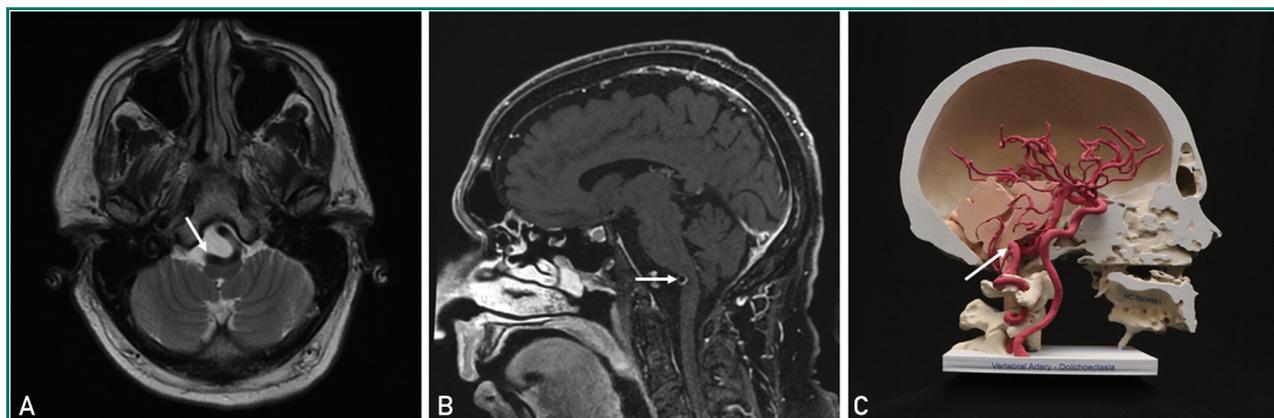


FIGURE. Vertebrobasilar dolichoectasia with medullary compression. T2-weighted axial (A) and T1-weighted sagittal postgadolinium (B) magnetic resonance images demonstrating dolichoectatic right-dominant vertebrobasilar system with medullary compression and displacement of the cervicomedullary junction (arrows). C, Lateral view of a 3D-printed model showing the point of medullary compression by the right vertebral artery (arrow).

current literature. Often, treatment is dependent on the presenting syndrome, with major emphasis on vascular risk factors.^{3,4}

Vertebrobasilar dolichoectasia should be considered in the differential diagnosis of patients with vascular risk factors presenting with progressive ataxia and medullary signs.

POTENTIAL COMPETING INTERESTS

The authors report no competing interests.

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