Teaching Neuro*Images*: Traumatic vertebral arteriovenous fistula

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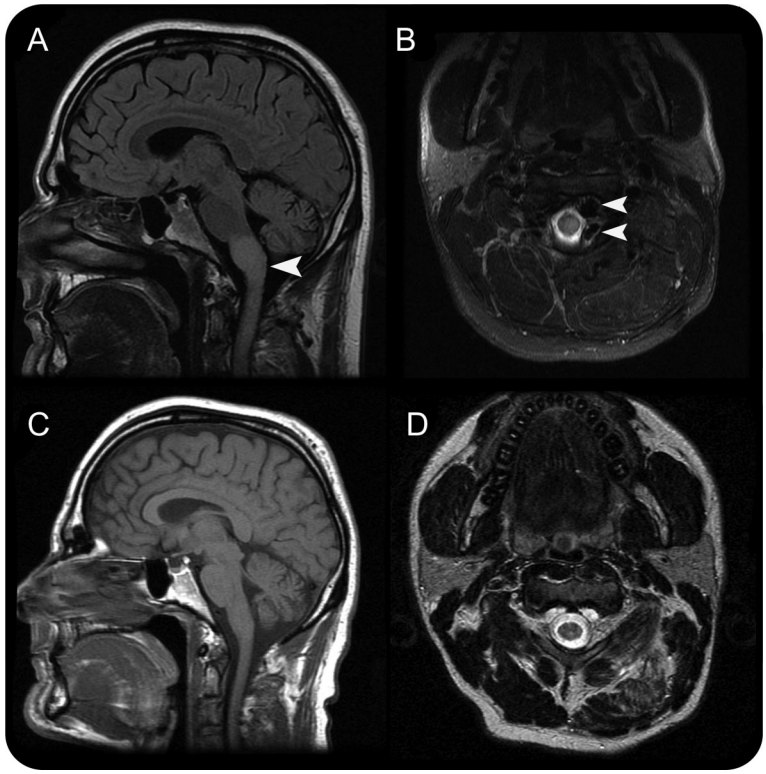
Figure 1 MRI fluid attenuation inversion recovery images



There is swelling and hyperintensity of the medulla and cervical cord (A) and engorged left cervical epidural veins (B, white arrowheads). Six weeks after endovascular occlusion of the fistula, the findings had resolved (C, D).

A 36-year-old man was stabbed in the neck. His left occipital artery was repaired. Ten years later, he noticed a left ear bruit and experienced intermittent paresthesias in the left trigeminal and C5 distributions and bilaterally below the knees. He had a 3-day episode of generalized incoordination. Examination revealed a pulsatile mass and loud bruit below the left occiput with mild weakness and decreased reflexes in the left arm.

MRI (figure 1) and angiography (figure 2) revealed brainstem and cervical cord hyperintensity due to a high-flow vertebrovertebral arteriovenous fistula.[1] His symptoms and MRI changes probably reflected venous hypertension: 6 weeks after endovascular occlusion they had resolved, and there was no fistula recurrence on repeat angiography.[2]

REFERENCES

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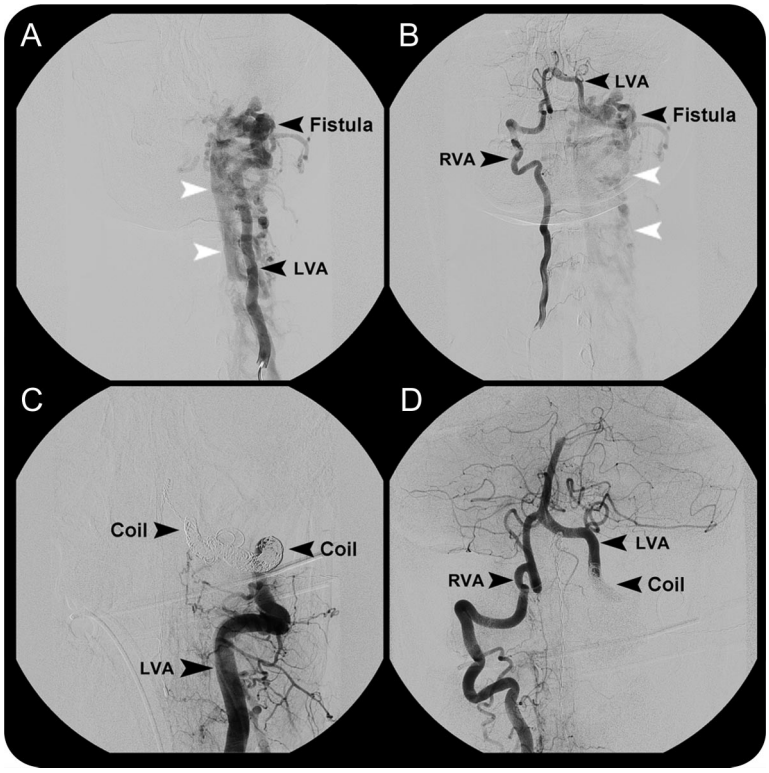
Disclosure: Dr. Boot and Dr. MacDonald report no disclosures. Dr. Parker performs interventional neuroradiology (60% effort) and has provided expert testimony in a medicolegal case. Dr. Jankelowitz reports no disclosures.

Figure 2 Angiograms of a high-flow left vertebrovertebral arteriovenous fistula



The fistula draining veins (A, B, white arrowheads) drew all flow from the left vertebral artery (LVA) (A). Most of the right vertebral artery flow (RVA) (B) and significant bilateral carotid flow (not shown) also drained to the fistula via retrograde flow in the distal LVA. There was resolution after endovascular occlusion (Coil) (C, D).

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Neurology 2011;76;e29-e30
DOI 10.1212/WNL.0b013e31820c2eaa