Teaching *NeuroImages*: Facial palsy due to arteriovenous malformation of the cheek

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Figure Imaging of the arteriovenous malformation

CT angiography reveals the arteriovenous malformation (arrow) originating from the posterior superior alveolar artery (A). Gadolinium-enhanced T1-weighted axial MRI reveals that the dilated vessel (arrowhead) compresses the left facial nerve (arrows) (B). Digital subtraction angiography shows that an artery feeding the malformation is occluded by coil embolization (arrowhead) (C).

A 44-year-old man presented with acute left facial weakness. Left Bell palsy with involvement of all motor divisions was diagnosed through neurologic examination and neurophysiologic studies. However, the clinical course was atypical for Bell palsy, as it worsened despite medical treatment for 2 months, prompting detailed neuroimaging studies. CT angiography revealed facial arteriovenous malformation (AVM) (figure, A), and gadolinium-enhanced T1-weighted axial MRI showed that the AVM compressed the facial nerve distal to the stylomastoid foramen (figure, B). The patient underwent digital subtraction angiography and coil embolization 2 months after neuroimaging studies (figure, C), and his symptoms improved immediately after intervention. Parotid tumor and hemangioma have previously been reported as rare causes of facial palsy.^{1,2} Our case shows that AVM can also cause facial palsy.

AUTHOR CONTRIBUTIONS

Jung Bin Kim, MD: concept and design of study, interpretation of data, drafting and revising the manuscript. Byung-Jo Kim, MD, PhD: concept and design of study, analysis and interpretation of data, drafting and revising the manuscript, study supervision.

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DISCLOSURE

The authors report no disclosures relevant to the manuscript. Go to Neurology.org for full disclosures.

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