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Figure. (A) Axial diffusion-weighted MRI demonstrates acute right anterolateral mesencephalic and left temporomesial infarcts (arrows). (B) Digital subtraction angiogram of the left vertebral artery shows segmental narrowing within the extradural segments. Note that narrowing ends when the vessel pierces the dura (arrow). (C) Elastica-van-Gieson staining. The lamina elastica interna shows disintegration and duplication due to an inflammatory process targeted against it (arrow). There is only minimal lumen remaining.

Giant cell arteritis causing multiple vertebro-basilar infarcts

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A 73-year-old woman was admitted with sudden onset of dysphagia and dysphonia. MRI showed multiple, acute vertebro-basilar infarcts (figure, A). Four-vessel angiography demonstrated distinct segmental narrowing of both extracranial vertebral arteries (see the figure, B). Giant cell arteritis was proven by temporal artery biopsy. Giant cell arteritis is a rare cause of vertebro-basilar infarcts¹

and was suspected in this case because segmental narrowing of the vertebral arteries was confined to the extracranial segments. This can be explained by the fact that the inflammatory process of giant cell arteritis is targeted against the elastic fibers that undergo a gross diminution or total loss as the vertebral arteries enter the skull.²

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