

Teaching Video NeuroImages: From 9 to 8-and-a-Half Syndrome After tPA

The Rebirth of Fellini

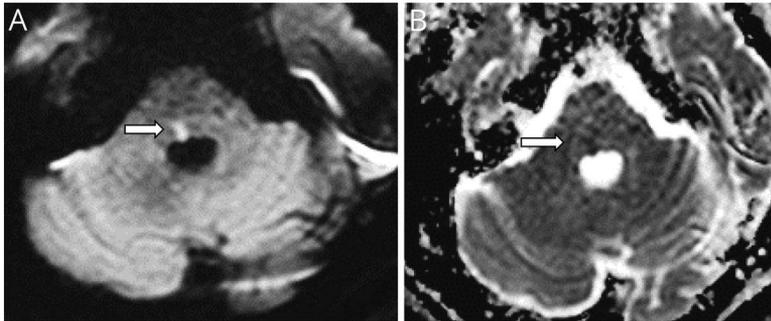
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Figure 1 Focal Acute Pontine Stroke



MRI with diffusion-weighted imaging (A) and apparent diffusion coefficient (B) sequences showing acute infarct (arrows) in the right dorsal pontine tegmentum in the area of the facial colliculus, medial longitudinal fasciculus, and abducens nucleus, just posterior to the medial lemniscus and corticospinal tracts, which are implicated in 9 syndrome.

A 73-year-old woman presented with acute impaired eye movements with preserved left eye abduction, right peripheral facial weakness (video 1), and left hemiparesis/hemihypesthesia. These deficits localized to the right pontine tegmentum involving the medial longitudinal fasciculus, facial nerve, abducens nucleus, medial lemniscus, and corticospinal tracts, as shown in figure 1. After tissue plasminogen activator, her left hemiparesis and hemihypesthesia resolved. Rosini et al.¹ first described these deficits as 9 syndrome (7th nerve + 1.5 syndrome + 0.5 hemiparesis/hypesthesia = 9). Classically, 1-and-a-half syndrome consists of intranuclear ophthalmoplegia and conjugate horizontal gaze palsy; preserved abduction will be present in the contralateral eye. Our patient's right eye adduction was paretic and not plegic. Our patient was left with an "8-and-a-half syndrome" (figure 2). Infarct, hemorrhage, vasculitis, and demyelination are etiologies of 8-and-a-half syndromes reported in the literature.

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Disclosure

The authors report no disclosures relevant to the manuscript. Go to [Neurology.org/N](https://www.neurology.org/N) for full disclosures.

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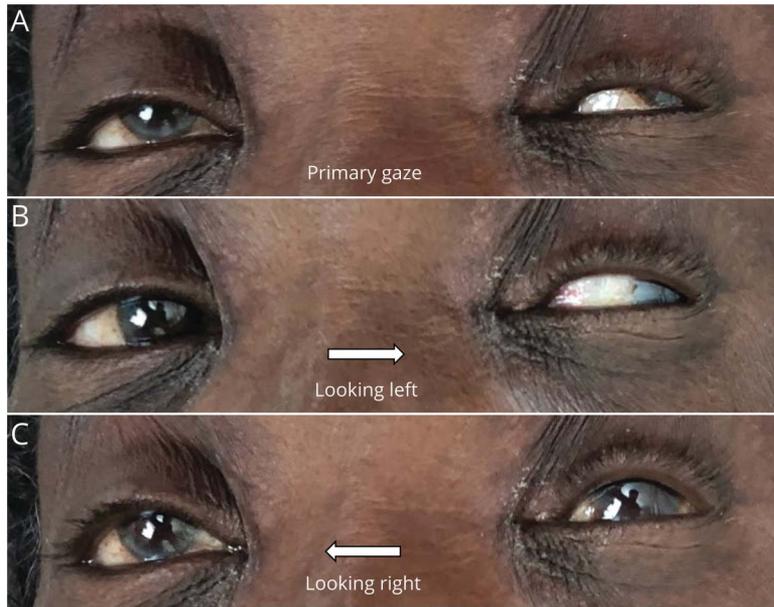
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Figure 2 Gaze Palsy



Demonstration of left eye exotropia at rest (A), along with impaired right eye adduction (B), loss of right eye abduction, and loss of left eye adduction (C) consistent with a 1-and-a-half phenomenon.

Appendix Authors

Name	Location	Contribution
Dennis Cole, MD	University of Virginia, Charlottesville	Acquisition of data, preparation of figures, literature review, manuscript drafting
Robert Wiggins, MD	University of Virginia, Charlottesville	Acquisition of data, manuscript drafting
Joseph Carrera, MD	University of Virginia, Charlottesville	Interpreted data, revised manuscript for intellectual content

Appendix (continued)

Name	Location	Contribution
Bradford Worrall, MD	University of Virginia, Charlottesville	Interpreted data, revised manuscript for intellectual content

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