A 71-year-old man presented with acute dizziness and right-sided paresthesia. Examination revealed spontaneous torsional nystagmus (top pole of eyes beating to the left) with a milder upbeat component (Video 1), right-sided weakness, and right hemisensory loss. MRI brain showed an acute left medial medullary infarct (Figure). Spontaneous
upbeat-torsional nystagmus typically results from selective damage to the vertical semicircular canal pathways in the medullary medial longitudinal fasciculus (MLF), often resulting in an ipsilesional-beating torsional nystagmus. It is important to note that extra-MLF lesions in the brachium conjunctivum and ventral tegmental tract can also produce similar findings (Figure). Although upbeat-torsional nystagmus is more commonly observed in posterior canal benign paroxysmal positional vertigo, it is elicited by the Dix-Hallpike maneuver and is not continuous or spontaneous.

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References
Teaching Video NeuroImage: Spontaneous Upbeat-Torsional Nystagmus From Medial Medullary Infarction

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