

# Teaching NeuroImage: Acute Onset Gait Instability and Lateropulsion Secondary to Cerebellar Vermis Stroke

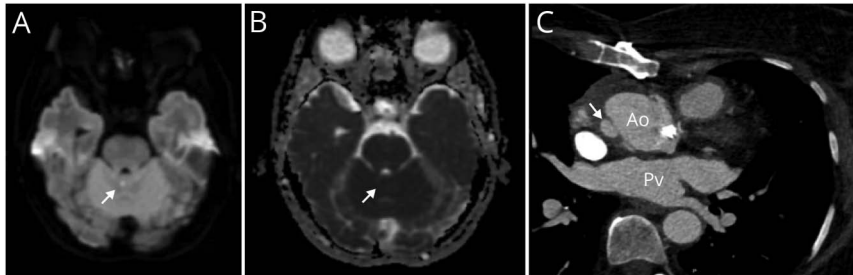
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**Figure** Right Cerebellar Vermis Stroke Causing Acute Onset Gait Instability and Right-Sided Lateropulsion



Axial brain MRI demonstrates diffusion restriction (A) with apparent diffusion coefficient correlate (B) in the right superior vermis (arrows), consistent with acute ischemic infarct. Chest CT angiography (C) reveals a 12 × 7 mm contrast outpouching (arrow) arising from the lateral wall of the aorta at the proximal graft anastomosis, consistent with pseudoaneurysm. Ao = ascending aorta; Pv = pulmonary vein.

## Case Description

A 65-year-old woman with hypertension, hyperlipidemia, ascending aortic aneurysm repair and valve replacement, and periprocedural atrial fibrillation (not on anticoagulation) presented with sudden-onset imbalance. The patient was on a treadmill when she experienced acute gait instability without vertigo. She held onto the bars to stay midline; otherwise, she leaned rightward. Examination revealed past-pointing and ataxic gait without dysarthria or nystagmus. Brain MRI demonstrated small superior vermis infarct. MRA revealed no significant stenosis. CTA of the chest showed an increase in known aortic pseudoaneurysm (Figure). Such pseudoaneurysms are not known to form thrombi or become embolic sources; she continued aspirin without anticoagulation. Gait instability and vertigo are common presenting signs of cerebellar infarction<sup>1</sup>; isolated lateropulsion may be seen in lesions involving the vermis.<sup>2</sup>

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## Disclosure

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

## Publication History

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## Appendix Authors

Name	Location	Contribution
<b>Galina Gheihman, MD</b>	Department of Neurology, Brigham and Women's Hospital, Boston, MA, USA; Department of Neurology, Massachusetts General Hospital, Boston, MA, USA	Drafting/revision of the manuscript for content, including medical writing for content; major role in the acquisition of data; study concept or design; analysis or interpretation of data
<b>Jacob Yomtoob, MD</b>	Department of Neurology, Brigham and Women's Hospital, Boston, MA, USA; Department of Neurology, Massachusetts General Hospital, Boston, MA, USA	Drafting/revision of the manuscript for content, including medical writing for content; major role in the acquisition of data; study concept or design; analysis or interpretation of data

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## Appendix (continued)

Name	Location	Contribution
<b>Anand Viswanathan, MD, PhD</b>	Department of Neurology, Massachusetts General Hospital, Boston, MA, USA	Drafting/revision of the manuscript for content, including medical writing for content; major role in the acquisition of data; study concept or design; analysis or interpretation of data

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## References

1. Wright J, Huang C, Strbian D, Sundararajan S. Diagnosis and management of acute cerebellar infarction. *Stroke*. 2014;45(4):e56-e58.
2. Ye BS, Kim YD, Nam HS, Lee HS, Nam CM, Heo JH. Clinical manifestations of cerebellar infarction according to specific lobular involvement. *Cerebellum*. 2010;9(4):571-579.

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