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

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**Case Description**

A 65-year-old female with hypertension, hyperlipidemia, ascending aortic aneurysm repair and valve replacement and peri-procedural 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 rightwards. Exam revealed past-pointing and ataxic gait without dysarthria or nystagmus. Brain MRI demonstrated small superior vermis infarct. MRA revealed no significant stenosis. CTA chest showed an increase in known aortic pseudoaneurysm (Figure). Such pseudoaneurysms are not known to form thrombus or become embolic sources; she continued aspirin without anticoagulation. Gait instability and vertigo are common presenting signs of cerebellar infarction;\(^1\) isolated lateropulsion may be seen in lesions involving the vermis.\(^2\)

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**References**


**Figure Title**

Right cerebellar vermis stroke causing acute onset gait instability and right-sided lateropulsion

**Figure Caption**

Axial brain MRI demonstrates diffusion restriction (A) with ADC correlate (B) in the right superior vermis (arrows), consistent with acute ischemic infarct. Chest computed tomography angiography (C) reveals a 12x7mm contrast outpouching (arrow) arising from the lateral wall of the ascending aorta (Ao) at the proximal graft anastomosis, consistent with pseudoaneurysm. Abbreviations in figure: Ao = Ascending aorta; Pv = Pulmonary vein.
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