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Figure. (A) Diffusion-weighted MRI revealed an acute left occipital lobe infarct. (B) Proton density-weighted sequence showed absence of the normal flow void in the left vertebral artery (arrow). (C) MR angiography showed absence of the distal portion of the left vertebral artery (arrow). (D) Cerebral angiography revealed an area of stenosis of the left vertebral artery, in the C2-C1 segment (arrow).

Amusement park stroke

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A previously healthy 30-year-old man presented to the emergency room 2 days after a roller-coaster ride complaining of diplopia and cervical pain. There was no trauma during the roller-coaster ride. His medical history was unremarkable. Examination revealed no meningeal signs and a right homonymous hemianopsia.

Diffusion-weighted MRI revealed an acute left occipital lobe infarct (figure, A). Proton density-weighted sequence showed absence of the normal flow void in the left vertebral artery (arrow in figure, B). MR angiography showed absence of the distal portion of the left vertebral artery (arrow in figure, C). Cerebral angiography revealed an area of stenosis of the left vertebral artery, in the C2-C1 segment (arrow in figure, D). The imaging studies supported the clinical diagnosis of left vertebral artery dissection (VAD) and left occipital infarction. The patient was placed on anticoagulation for 6 months and subsequently

on aspirin. He has no recurrent cerebral ischemia after 10 months of follow-up.

Neck hyperextension almost always occurs during roller-coaster rides. VAD can result from rotational forces applied to the third segment of the artery at the C2 and C1 vertebral levels. The dissection leads to stenosis of the true lumen and disruption of the epithelium. The resulting slow flow, turbulence, or endothelial irregularity can lead to local thrombus formation and subsequent artery-to-artery embolism, usually to the posterior cerebral artery. VAD should be considered in the differential diagnosis of vertebrobasilar territory ischemia in young adults, even when there is no preceding trauma. Stroke occurring after a roller-coaster ride should be considered due to extracranial vessel dissection until proven otherwise. This case joins the series of neurologic injuries reported in the literature due to roller-coaster rides.^{1,2}

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