A 63-year-old woman was referred for evaluation of a transient ischemic attack with right arm and leg involvement. On examination, she had a right neck bruit. The head CT scan showed a small, old ischemic infarction in the periventricular area of the right frontal lobe. Digital subtraction angiography revealed a total occlusion of both internal carotid arteries, a severe stenosis of the origin of the right vertebral artery (Figure, upper left), and an atretic left vertebral artery. The right vertebral artery supplied the vertebrobasilar circulation and the right and left hemispheres (Figure, right). Because of this functionally unique cerebral blood supply and location of the stenosis, the patient was not considered a candidate for surgical revascularization. Accordingly, she underwent percutaneous stenting using adjunctive abciximab with excellent angiographic results (Figure, lower left). During the brief balloon inflation (<15 s) the patient did not develop neurological or hemodynamic symptoms. The hospital stay was uneventful, and she was discharged the next day. At 6 months, she had no recurrent neurological events. To our knowledge, this is the first report describing successful percutaneous stenting of a dominant vertebral artery supplying the entire brain.

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(Circulation. 2001;103:e61.)

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Percutaneous Stenting of a Vertebral Artery Supplying the Entire Brain
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Circulation. 2001;103:e61
doi: 10.1161/01.CIR.103.11.e61
Circulation is published by the American Heart Association, 7272 Greenville Avenue, Dallas, TX 75231
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Print ISSN: 0009-7322. Online ISSN: 1524-4539

The online version of this article, along with updated information and services, is located on the World Wide Web at:
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