Deployment of distal posterior cerebral artery flow diverter in tortuous anatomy

Kunal Vakharia, MD,1,3 Stephan A. Munich, MD,1,3 Muhammad Waqas, MBBS,1,3 Swetadri Vasan Setlur Nagesh, PhD,4 and Elad I. Levy, MD, MBA1–4

Departments of 1Neurosurgery and 2Radiology, Jacobs School of Medicine and Biomedical Sciences, University at Buffalo; 3Department of Neurosurgery, Gates Vascular Institute at Kaleida Health, Buffalo; and 4Canon Stroke and Vascular Research Center, University at Buffalo, New York

Progressive deconstruction with flow diversion using a Pipeline embolization device (PED; Medtronic) can be utilized to promote thrombosis of broad-based fusiform aneurysms. Current flow diverters require a 0.027-inch microcatheter for deployment. The authors present a patient with a fusiform P2–3 junction posterior cerebral artery aneurysm in which they demonstrate the importance of haptics in microwire manipulation to recognize large-vessel anatomy versus perforator anatomy that may overlap, especially when access is needed in distal tortuous circulations. In addition, the authors demonstrate the need for appropriate visualization before PED deployment. Postembolization runs demonstrated optimal wall apposition with contrast stasis within the aneurysm dome.

The video can be found here: https://youtu.be/8kfsSvN3XqM.

KEYWORDS flow diversion; Pipeline embolization device; posterior cerebral artery; video