

Technical aspects of web device in aneurysm treatment

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ABSTRACT

Wide-neck bifurcation aneurysms (WNBAs) make up 26–36% of all brain aneurysms. Intrasaccular flow disruption is an innovative technique for the treatment of WNBAs. The Woven EndoBridge (WEB) device (Sequent Medical, Aliso Viejo, California USA) is the only United States Food and Drug Administration approved intrasaccular flow disruption device. In this video article, a few cases of intracranial aneurysms treated with the WEB device are presented and various aspects of treating WNBAs with the WEB device, including aneurysm/ device selection strategies, and procedural technique, are discussed (video 1).

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REFERENCES

- 1 De Leacy RA, Fargen KM, Mascitelli JR, et al. Wide-neck bifurcation aneurysms of the middle cerebral artery and basilar apex treated by endovascular techniques: a multicentre, core lab adjudicated study evaluating safety and durability of occlusion (branch). J Neurointerv Surg 2019;11:31–6.
- 2 Goyal N, Hoit D, DiNitto J, et al. How to web: a practical review of methodology for the use of the Woven EndoBridge. J Neurointerv Surg 2020;12:512–520.
- 3 Pierot L, Liebig T, Sychra V, et al. Intrasaccular flow-disruption treatment of intracranial aneurysms: preliminary results of a multicenter clinical study. AJNR Am J Neuroradiol 2012;33:1232–8.
- 4 Pierot L, Spelle L, Molyneux A, et al. Clinical and anatomical followup in patients with aneurysms treated with the web device: 1-year follow-up report in the cumulated population of 2 prospective, multicenter series (WEBCAST and French Observatory). Neurosurgery 2016;78:133–41.



Video 1 ^{1–4}



