

# Wide necked anterior communicating artery aneurysm

Wide necked [anterior communicating artery aneurysm](#) represent a subset of lesions with challenging endovascular treatment despite new endoluminal and intrasaccular devices.

[Woven EndoBridge](#) (WEB) treatment of anterior communicating artery aneurysms requires a favorable angle between the long axis of the aneurysm and that of the parent vessel (A1 segment of the anterior cerebral artery) as reported by Lubicz et al <sup>1)</sup>.

## Case series

### 2015

The aim of a study was to investigate the feasibility, safety, and efficacy of the [Woven EndoBridge](#) (WEB) WEB Dual-Layer and WEB Single-Layer devices for the treatment of [wide necked aneurysm](#) of the [anterior communicating artery](#).

Patients with anterior communicating artery aneurysms treated with the WEB device between June 2013 and March 2014 in 5 French centers were analyzed. Procedural success, technical complications, clinical outcome at 1 month, and immediate and 3- to 6-month angiographic follow-up results were analyzed.

Ten patients with unruptured anterior communicating artery aneurysms with a mean neck diameter of 5.4 mm were treated with the WEB. Treatment failed in 3 of the 10 aneurysms without further clinical complications. One patient developed a procedural thromboembolic event, and the other 6 had normal neurologic examination findings at 1-month follow-up. Immediate anatomic outcome evaluation showed adequate occlusion (total occlusion or neck remnant) in 6 of 7 patients. Angiographic control was obtained in all patients, including 6 adequate aneurysm occlusions (3 complete occlusions and 3 neck remnants) at short-term follow-up.

In our small series, treatment of wide-neck anterior communicating artery aneurysms with the WEB device was feasible and safe. However, patient selection based on the aneurysm and initial angiographic findings in the parent artery is important due to the limitations of the WEB device navigation <sup>2)</sup>.

### 2009

Between January 2005 and February 2008, stent-assisted coiling was performed in 21 patients with wide-neck AcomA aneurysms. Patient demographics, aneurysm morphology, procedures, and clinical and angiographic outcomes were retrospectively reviewed.

Successful deployment of the stent in the targeted artery was achieved in all patients. Nineteen Neuroform 2 or Neuroform 3 stents and 2 LEO stents were used. The distal segment of the stent was positioned in the ipsilateral A2 in 12 patients, in the contralateral A2 across the AcomA in 5 patients, and into the aneurysm sac in 4 patients. Complete occlusion was achieved in 18 patients; near-complete occlusion, in 2 patients; and partial occlusion, in 1 patient. Intraoperative perforation of the aneurysm developed in 1 patient, which was secured by subsequent coiling. Angiographic follow-up in

12 patients for 6.9 months showed 1 recanalization and no in-stent stenosis <sup>3)</sup>.

<sup>1)</sup>

Lubicz B, Mine B, Collignon L, et al. WEB device for endovascular treatment of wide-neck bifurcation aneurysms. *AJNR Am J Neuroradiol* 2013;34:1209-14

<sup>2)</sup>

Gherasim DN, Gory B, Sivan-Hoffmann R, Pierot L, Raoult H, Gauvrit JY, Desal H, Barreau X, Herbreteau D, Riva R, Ambesi Impiombato F, Armoiry X, Turjman F. Endovascular treatment of wide-neck anterior communicating artery aneurysms using WEB-DL and WEB-SL: short-term results in a multicenter study. *AJNR Am J Neuroradiol*. 2015 Jun;36(6):1150-4. doi: 10.3174/ajnr.A4282. Epub 2015 Mar 19. PubMed PMID: 25792534.

<sup>3)</sup>

Huang Q, Xu Y, Hong B, Zhao R, Zhao W, Liu J. Stent-assisted embolization of wide-neck anterior communicating artery aneurysms: review of 21 consecutive cases. *AJNR Am J Neuroradiol*. 2009 Sep;30(8):1502-6. doi: 10.3174/ajnr.A1618. Epub 2009 May 20. PubMed PMID: 19461055.

From:

<https://neurosurgerywiki.com/wiki/> - **Neurosurgery Wiki**

Permanent link:

[https://neurosurgerywiki.com/wiki/doku.php?id=wide\\_necked\\_anterior\\_communicating\\_artery\\_aneurysm](https://neurosurgerywiki.com/wiki/doku.php?id=wide_necked_anterior_communicating_artery_aneurysm)

Last update: **2024/06/07 02:50**

