Stentassisted coiling has become one of the most preferred techniques in the treatment of wide-neck intracranial aneurysms; however, long-term patency and safety of the self-expanding neurostents and their role in durability of the endovascular treatment has remained ambiguous.

In 500 wide-neck cerebral aneurysms with different types of self-expanding neurostent assistance in 468 patients. Patient and aneurysm characteristics, pharmacologic therapy protocol, complications, and initial occlusion grades were analyzed. Patients underwent angiographic follow-up at 6 months to 7 years after treatment. DSA or MRA images of all patients were analyzed to assess the occlusion rate of aneurysms and patency of the parent artery.

Enterprise (n = 340), Solitaire (n = 98), Wingspan (n = 41), LEO (n = 16), and Neuroform (n = 5) stent systems were used in this series. Stent-related thromboembolic events occurred in 21 patients and intraoperative rupture occurred in 4 patients. Initially, complete occlusion was achieved in 42.2% of the aneurysms, and, according to the last follow-up data, the rate had progressed to 90.8%. Recanalization rate at 6 months was 8%, whereas the late recanalization rate was 2%.

Geyik et al conclude that the use of stents in endovascular treatment provides high rates of complete occlusion and low rates of recurrence at a long-term follow-up study [1].

1)
Geyik S, Yavuz K, Yurttutan N, Saatci I, Cekirge HS. Stent-assisted coiling in endovascular treatment of 500 consecutive cerebral aneurysms with long-term follow-up. AJNR Am J Neuroradiol. 2013 Nov-Dec;34(11):2157-62. doi: 10.3174/ajnr.A3574. Epub 2013 Jul 25. PubMed PMID: 23886748.