Nautilus-assisted coil embolization for a complex AcomA wide-necked aneurysm in the setting of acute subarachnoid hemorrhage

Alexander Sirakov, Svetozar Matanov, Pervinder Bhogal, Stanimir Sirakov

ABSTRACT
Numerous devices and sophisticated strategies have been developed to further increase the number of aneurysms amenable to endovascular treatment. Despite the superfluity of available neurovascular armamentarium, wide-necked bifurcation aneurysms can still pose a significant technical challenge to the treating clinician. Neck bridging is a conceptually new approach, which provides increased occlusion rates with lower recurrence and complications rates. The Nautilus (EndoStream Medical) is an intrasaccular bridging device intended to assist in coil embolization of wide-necked cerebral aneurysms. This CE-marked device, available in various sizes, consists of flexible-layers, and is a nitinol-based, detachable implant. The device is delivered through a standard microcatheter with a minimal 0.0165” inner diameter and is fully radiopaque and completely resheathable.

Owing to its unique ‘tornado’ like shape the device entirely reconstructs the aneurysmal neck, which facilitates the following coil embolization. In this video, we demonstrate the use of Nautilus assisted coil embolization for a complex anterior communicating artery (AcomA) wide-necked aneurysm in the setting of acute subarachnoid hemorrhage.

Contributors AS and SM: wrote the manuscript and edited the video. PB: carried out a critical review. SS: performed the case and final review.

Funding The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

Competing interests None declared.

Patient consent for publication Not required.

Ethics approval All procedures performed in the studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards.

Provenance and peer review Not commissioned; externally peer reviewed.

Open access This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: http://creativecommons.org/licenses/by-nc/4.0/.

ORCID iD Stanimir Sirakov http://orcid.org/0000-0001-6034-5340

REFERENCES