Methods All adverse events occurring until 5-year follow-up were independently evaluated by an expert. Aneurysm occlusion was evaluated by an independent core lab using a 3-grade scale: complete occlusion, neck remnant, and aneurysm remnant.

Results The safety and efficacy populations comprised 100 patients and 95 aneurysms, respectively. No adverse event related to the device occurred after the procedure during the 5-year follow-up period. Mortality at 5 years was 7.0% (7/100 patients) including mortality related to the WEB (0/100, 0.0%), the procedure (1/100, 1.0%), and another condition (6/100, 6.0%). At 5 years, complete aneurysm and adequate occlusion were observed in 49/95 (51.6%) and 74/95 (77.9%), respectively. Retreatment rate at 5 years was low (11.6%).

Conclusions This analysis conducted in a population of patients with complex-to-treat aneurysms (wide neck bifurcation aneurysms) confirms WEB's high safety profile. Additional evidence demonstrates good stability of aneurysm occlusion with adequate occlusion (complete occlusion or neck remnant) at 5 years in 77.9% of aneurysms with a low retreatment rate.

REFERENCES

Do you have any conflict of interest to declare?: Yes Conflicts of Interest Consultant for Balt, Microvention, phenox.

008 PRIMARY ROBOTIC-ASSISTED ENDOVASCULAR TREATMENT OF INTRACRANIAL ANEURYSMS
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10.1136/neurintsurg-2022-ESMINT.8

Background The aim of the study is to evaluate the technical success of primary robotic-assisted endovascular treatment of intracranial aneurysms using the CorPath GRX Robotic System.

Methods Six patients (two males and four females) with a median age of 52.5 years (42–70) underwent primary robotic-assisted endovascular treatment of intracranial aneurysms between March 30 and April 27, 2022. One patient was treated after subarachnoid hemorrhage.

Results Aneurysms originated from the internal carotid artery in three cases, the anterior communicating artery two times and once from the middle cerebral artery. Non-ruptured aneurysms were treated by flow-diverter implantation and one ruptured aneurysm was treated by coiling. The technical success rate of the procedures was 100%.

Conclusions Robotic-assisted endovascular treatment of intracranial aneurysms is technically feasible.

Do you have any conflict of interest to declare?: No

009 NAUTILUS INTRASACULAR SYSTEM: POST-MARKET EU STUDY RESULTS
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Introduction The Nautilus is a novel, CE-marked, self-conforming intrasaccular neck cover.

Aim of study To collect data on the safety and performance of the Nautilus in patients undergoing coil embolization of wide neck cerebral aneurysms.

Methods Consecutive patients were enrolled in this multicenter observational post-market clinical trial. The primary outcome, adequate occlusion (Raymond Roy grade I/II), was core lab adjudicated.

Results 30 patients with ruptured (47.0%) and unruptured (53.0%) aneurysms were enrolled. Twenty-eight (93.0%) of patients met the primary endpoint of successful aneurysm occlusion at follow-up. There were no device-related SAEs and no patients required the use of adjunctive bridging devices or retreatment.

Conclusions In this post-market cohort of ruptured and unruptured aneurysms, the Nautilus appears to be safe and effective in treating wide-neck aneurysms.

Do you have any conflict of interest to declare?: Yes Conflict of Interest Statement Research support from Stryker, Penumbra, Medtronic, and Microvention; Consultant/ownership interest in Impatia Care, Cerebrotech, Viseon, Endostream, Rebound Therapeutics, Vastrax, BlinkTBI, Serenity, Neurotechnology Investors, Neurvana, and Cardinal Consulting.

010 THE NECESSITY OF MONITORING PLATELET RESPONSE AND ADJUSTING ANTIPLATELET AGENTS FOR ENDOVASCULAR TREATMENT OF UNRUPTURED INTRACRANIAL ANEURYSMS: A SINGLE-CENTER, RETROSPECTIVE, COHORT STUDY
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10.1136/neurintsurg-2022-ESMINT.10

Introduction To reduce thromboembolism, tailored antiplatelet regimen for endovascular treatment of unruptured intracranial aneurysms has been widely employed.

Aim of study This study aimed to analyze the efficacy of tailored antiplatelet regimen using P2Y12 reaction unit (PRU) in endovascular treatment.

Methods Patients with unruptured intracranial aneurysms treated by neurointervention from 2017 to 2020 were enrolled in this retrospective study. In the tailored group, the antiplatelet agents was changed to low-dose prasugrel according to the PRU (VerifyNow). The standard group received aspirin and clopidogrel without PRU measurement. Any ischemic (transient ischemic attack and major stroke) or hemorrhagic complications in peri-procedural and follow-up periods were reported.

Result Total 1738 patients with 1960 aneurysms were included (the standard group; n=1011, tailored group; n=949). Out of 1960 aneurysms, 896 (45.7%) were treated with coil embolization, 1000 (51.0%) were stent-assisted, and 64 (3.3%) were flow diversion. The rate of ischemic complications in acute to subacute periods were not significantly different between the standard and tailored groups (1.94% vs. 1.23%, p=0.24). In the subgroup analysis, the flow diverter group showed more ischemic complications in the standard group without significance (10.0% vs. 2.9%, p=0.33). There was no difference in the risk of major bleeding (0.22% vs. 0.25%,
p = 1.0) and the delayed ischemic complications (0.43% vs. 0.62%, p = .74).

**Conclusion** Active monitoring and adjustment antiplatelet agents did not reduce ischemic complications in endovascular treatment; however, tended to reduce the ischemic complications, especially in flow diversion. Low-dose prasugrel may be feasible without increasing hemorrhage in the endovascular treatment of unruptured intracranial aneurysms.

**REFERENCES**


Do you have any conflict of interest to declare?: No

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**O11** MYCOTIC ANEURYSM OF THE ANTERIOR HIPPOCAMPAL ARTERY WITH IMMEDIATE CEREBRITIS AFTER COILING COMPROMISED BY A RUPTURE

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A 29 years old woman presented with an intracerebral and ventricular hemorrhage due to an aneurysm of the right anterior hippocampal artery. Endovascular treatment was complicated by a rupture. Immediately after the procedure, she had a left sided hemiplegia with a cerebritis being found in the right internal capsule. On antibiotics, she recovered with residual paresis. This case is special because the infection became apparent immediately after the endovascular procedure and not with a delay of a few weeks as is usually reported. This is probably due to the periprocedural rupture of the mycotic aneurysma releasing the infectious agent.

**O12** ENDOVASCULAR TREATMENT OF GIANT PART-THROMBOSED VERTEBRAL V4 ANEURYSM CAUSING SIGNIFICANT BRAINSTEM COMPRESSION

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Paediatric intracranial aneurysms are rare. We present a case of a previously well 11 year old with a giant partially thrombosed right vertebral V4 aneurysm treated via a purely endovascular technique.

**Background** 11 year old with no significant medical or familial history presented to the emergency department with a three-day history of vomiting and a one-year history of neck pain occasionally waking her from sleep.

MRI scan showed a partially thrombosed aneurysm arising from the V4 segment of the right vertebral artery with significant mass effect on the underlying brainstem. This was confirmed by catheter angiography, which showed a small stump of normal-appearing V4 just proximal to basilar origin. The left V4 segment was compressed by mass-effect from the aneurysm and there were no visible posterior communicating arteries during carotid injections.

**Conclusion** Pre-treatment deterioration because of respiratory/swallowing compromise and tetraparesis lead to aspiration that required emergency intubation and ventilation.

A national multi-disciplinary discussion resolved on an endovascular approach with stent assisted coiling. The patient was commenced on aspirin and clopidogrel. Other treatment options considered included surgical/endovascular parent vessel occlusion of the right vertebral artery.

Open microsurgical treatment was deemed to carry too high a risk of morbidity or mortality. Parent vessel occlusion was considered but felt to be a poor option because of the degree of compression of the left vertebral artery and no visible posterior communicating arteries.

At initial endovascular treatment a braided stent was placed from the basilar artery to the right vertebral artery supplemented by partial coiling of the aneurysm. This improved flow within the basilar artery with flow alteration within the aneurysm. A post treatment MRI scan showed increasing thrombosis of the aneurysm with a patent basilar artery and right vertebral artery.

Post procedure tetraparesis and severe bulbar dysfunction remained. Clinical progress was initially slow and at three weeks further deterioration prompted repeat angiography. Subsequently, she underwent further endovascular treatment of the aneurysm necessitating placement of three overlapping flow diversion stents.

She was slowly weaned from the ventilator and making good neurological recovery. At five months post treatment worsening headache, hypertension and respiratory distress requiring mechanical ventilation prompted further review. MRI showed interval increase in aneurysm dimensions with filling of the aneurysm body.

Significant hydrocephalus was present as well. A VP shunt was inserted prior to further endovascular intervention. The aneurysm recurrence was treated with threeflow diverging stents overlapping within the pre-existing stent construct, which achieved alteration of flow within the aneurysm.

Since the last intervention progress has been steady, she has been weaned from the ventilator. There has been progressive improvement in her tetraparesis however there remains a differential weakness predominantly affecting the left. She is now able to climb steps. She remains NJ fed but is able to swallow her own saliva and a re-introduction of thickened oral feeds is planned.

Most recent imaging shows no significant refilling. The mass effect on the brainstem is also stable. No new perianeurysmal signal change is seen.