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PULSERIDER FOR ANEURYSM RE-TREATMENT: COMBINED SUB-ANALYSIS OF THE ANSWER AND AWARD STUDIES

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Introduction PulseRider is a neck bridging device designed to aid in coiling of wide-neck intracranial aneurysms. When in place, it provides a ‘floor’ to the coil mass while allowing for easy access to the aneurysm sac, making it potentially suited for retreatment cases with limited working space.

Methods Procedural success and outcomes of retreatment cases included in the AWARD (Safety Study of the PulseRider in Patients Undergoing Treatment for Bifurcation Intracranial Aneurysms) and ANSWER (Adjunctive Neurovascular Support for Wide-neck aneurysm Embolization and Reconstruction) studies are presented.

Results Eleven PulseRider cases (10 female, mean age 50.9 years), 6 in AWARD and 5 in ANSWER, were retreatments of previously coiled aneurysms. Eight of the patients had 1 previous procedure, 2 had 2 previous treatments, and 1 had 3, including a failed attempt at Y-stenting. Mean aneurysm neck size was 4.98 mm (range 3.0–11.6 mm). Locations included basilar (7), carotid terminus (2) and MCA (2). PulseRider was successfully implanted with the ability to retain coils within the aneurysm in all cases. Immediately post-procedure, core lab adjudicated adequate occlusion rate was 91% (4/11 [36%] RR-I, 6/11 [55%] RR-II and 1/11 [9%] RR-III). At the one year follow up, the adjudicated rate of adequate aneurysm occlusion was 80% (6/10 [60%] RR-I, 2/10 [20%] RR-II, and 2/10 [20%] RR-III). There were no neurological deaths or major ipsilateral stroke (primary safety endpoint in the ANSWER study) and neurological decline was noted in one patient (the case of 3 previous treatments).

Conclusion Retreatment of previously coiled wide-neck aneurysms with the PulseRider device resulted in 100% procedural success and 80% complete or near complete occlusion at 1 year with an acceptable safety profile.

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FACIAL PAIN CAUSED BY A CAVERNOUS SINUS ANEURYSM TREATED WITH ENDOVASCULAR FLOW DIVERSION: CASE REPORT AND REVIEW OF THE LITERATURE

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Flow diversion is a commonly-used endovascular modality to treat intracavernous aneurysms. Cases of intracavernous aneurysms causing facial pain are rare, and flow diversion may represent a viable treatment option in order to alleviate pain caused by these aneurysms. We present the case of a 53-year-old woman who presented with a two-year history of persistent, left-sided and facial pain and numbness located in the left V1-V2 distribution of the Trigeminal nerve. A brain MRI was obtained which showed a left internal carotid artery aneurysm projecting infero-laterally within the cavernous sinus and possibly compressing left V1 and V2 roots of the Trigeminal nerve. This was further investigated and confirmed with digital subtraction angiography. To reduce mass effect, the aneurysm was treated with flow-diversion rather than coil-embolization. Her pain and numbness gradually improved with near-complete resolution at 6 months post-treatment. 6-month follow-up angiography demonstrated minimal residual filling of the aneurysm suggesting a reduction in size of the aneurysm sac. This case, in addition to prior reports which we review here, demonstrate the ability of flow diversion to treat facial pain secondary to intracavernous aneurysms.

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PRELIMINARY EXPERIENCE WITH SURPASS EVOLVE FLOWDIVERTER DEVICE: CLINICAL AND TECHNICAL NOTE

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Objective The aim of the study was to evaluate safety and efficacy of the new generation flow diverter device, Surpass Evolve (SE).

Methods In two Finnish early-user centers, twenty-seven patients with ruptured or unruptured intracranial aneurysms were treated with SEs. All procedure-related events were recorded into the local database for further analysis. We report here our results concerning the clinical and radiological