outcomes of EVT in patients selected using collateral vs perfusion imaging in the late time window.

Methods We pooled individual patient-level data from seven trials and registries of EVT-treated patients in the late-time window. These studies were conducted in North America, Europe, and Korea. We collected clinical, imaging, and outcome data. We classified patients according to whether selection for EVT was done using collateral imaging alone (collateral cohort) vs perfusion plus collateral imaging (perfusion cohort). The primary outcome was the proportion of patients achieving independent 90-day functional outcome (modified Rankin scale 'mRS' 0–2). We also collected data on successful reperfusion (thrombolysis in cerebral infarction 2b-3), and symptomatic intracranial hemorrhage. We used the propensity score-weighting method to balance important predictors between the perfusion vs collateral cohorts.

Results In 608 patients from seven studies, the mean (SD) age was 67.4 (14.6) years, and 50.5% were females. The median onset/last known well to emergency arrival time was 8.8 hours and 53.2% had wake-up strokes. Both cohorts had collateral imaging and 379 patients (62.3%) also had perfusion imaging. Independent functional outcome was achieved in 43.1% overall. In the perfusion cohort, 168/379 patients (45.5%) achieved functional independence vs 94/214 (43.9%) in the collateral cohort ($P=0.71$). A logistic regression model adjusting for inverse-probability-weighting showed no difference in 90-day mRS score of 0–2 (adjusted OR 1.05, 95%CI 0.69 to 1.59, $P=0.83$) or in a favorable shift in 90-day mRS (common adjusted OR 1.01, 95%CI 0.69 to 1.47, $P=0.97$) among patients in the perfusion vs collateral cohorts.

Abstract LB-006 Figure 1

Conclusion In this pooled individual patient-level analysis from multi-national studies and registries, late window patients who were selected for EVT using collateral imaging achieved comparable functional outcomes to patients who had perfusion imaging.

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LB-007 PIPELINE EMBOLIZATION DEVICES FOR THE TREATMENT OF INTRACRANIAL ANEURYSMS (PEDESTRIAN), SINGLE CENTRE REGISTRY: LONG-TERM ANGIOGRAPHIC AND CLINICAL OUTCOMES FROM 1,000 ANEURYSMS WITH PED SHIELD SUBANALYSIS

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Background Prospective studies have established the safety and efficacy of the Pipeline™ Embolization Device (PED) for treatment of intracranial aneurysms (IA).

Objective To investigate long-term outcomes from the Pipeline Embolization Devices for the Treatment of Intracranial Aneurysms (PEDESTRIAN) Registry.

Methods The PEDESTRIAN registry data was retrospectively reviewed, which included patients (March 2006-July 2019) with complex IAs treated with PED. Patients with unfavorable anatomy and/or recurrence following previous treatment were included and excluded those with acute subarachnoid hemorrhage. The primary angiographic endpoint was complete occlusion and long-term stability. Clinical and radiological follow-up was performed at 3–6 months, 12 months, and yearly thereafter.

Results A total of 835 patients (mean age 55.9 ± 14.7 years; 80.0% female) with 1,000 aneurysms were included. Aneurysms varied in size: 64.6% were small (≤ 10 mm), 25.6% were large (11–24 mm), and 9.8% were giant (≥ 25 mm). A total of 1,214 PEDs were deployed. Follow-up angiography was available for 85.1% of patients with 776 aneurysms at 24.6 ± 25.0 months (mean). Complete occlusion was demonstrated in 75.8% of aneurysms at 12-months, 92.9% at 2–4 years, and 96.4% at >5 years. During the post-procedural period, mRS remained stable or improved in 96.2% of patients, with stability or improvement in 99.1% of patients >5 years. The overall major morbidity and neurological mortality rate was 5.8%.

Conclusion This study demonstrated high rates of long-term complete aneurysm occlusion, stable or improved functional outcomes, and low rates of complications and mortality. Clinical and angiographic outcomes improved over long-term follow-up, demonstrating endovascular treatment of IA with PED is safe and effective.

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LB-008 THE CONTOUR DEVICE, A NOVEL INTRASACULAR FLOW DISRUPTER FOR THE TREATMENT OF INTRACRANIAL ANEURYSMS: EARLY EXPERIENCE AND MID-TERM FOLLOW-UP

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Introduction The Contour device is a new intrasaccular flow disrupter designed to treat bifurcation and wide-neck bifurcation intracranial aneurysms. This device provides a stable scaffold framework across the aneurysm neck. The Contour is re-sheathable and re-deployable and the detachment method is electrolytic. We report our center's experience and mid-term

follow-up (FU) in a series of patients treated with the Contour device.

Materials and Methods Thirty-four aneurysms in 31 patients (21 Females, 10 males; mean age: 59 ys.) treated by the Contour device were included in the study. Thirty aneurysms were unruptured, 3 recanalized and one ruptured. The aneurysm locations were: 14 Acom complex, 8 middle cerebral artery, 3 Pcom/PCA, 2 Ophthalmic, 1 AChA, 1 Sup. Hyp., 1 ICA bifurcation, 2 Tip Basilar, 1 ASCA, 1 PICA. The angiographic follow-up at 24 hour was available in 30/34 aneurysms and mid-term (3–6 mo) FU is available in 24/34 aneurysms. mRS evaluation at 1 month was available in all cases.

Results Contour procedure was successful in 32 cases and failed in two. No procedural angiographic complications were observed. Angiographic results at 24 hours were: complete occlusion in 20% (6/30) of aneurysms, neck remnant in 43% (13/30), and aneurysm residual opacification in 37% (11/30). Compared with the results observed immediately after the procedure, the occlusion rate observed at the 24-hour angiographic follow-up, was not modified in 57% of the aneurysms (17/30) and improved in 13 (43%). The evaluation of the occlusion rate at mid-term follow-up showed occlusion in 46% of aneurysms (11/24), neck remnant in 37.5% (9/24) and residual aneurysm in 16.5% (4/24). There was no aneurysm bleeding during the periprocedural and FU period. There was no mortality. A transient postoperative morbidity was observed in the ruptured aneurysm unrelated to the device. Another patient suffered from a reversible contrast-induced encephalopathy. Preprocedural mRS was 0 in 30 patients and 1 in one. At 3–6 mo FU, mRS in relation to pre-treatment state was unchanged in all patients.

Conclusion The use of Contour device is an effective and relatively safe technique in the treatment of intracranial aneurysms. However, more experience and long-term follow-up are needed.

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LB-009

RETREATMENT OF RESIDUAL AND RECURRENT ANEURYSMS FOLLOWING EMBOLIZATION WITH THE WOVEN ENDOBIDGE (WEB) DEVICE: MULTICENTER CASE SERIES

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Objective The Woven EndoBridge (WEB) device was approved by the U.S. Food and Drug Administration (FDA) as the first

intrasaccular device for intracranial aneurysm treatment in December 2018. Its use has become more common since then, but both trial results and post-market experiences have raised questions about efficacy in achieving complete aneurysm obliteration. Retreatment after WEB embolization has not been extensively discussed.

Methods Retrospective review across 13 institutions identified all occurrences of WEB retreatment within neurovascular databases. Details regarding demographics, aneurysm characteristics, treatment considerations, clinical outcomes, and aneurysm occlusion were obtained and analyzed.

Results Twenty-nine aneurysms were retreated in 29 patients. Endovascular methods were used for 22 cases and 7 were treated surgically. Endovascular treatments included stent-assisted coiling (12), flow diversion (6), coiling (2), PulseRider-assisted coiling (1), and additional WEB placement (1). Surgical treatments included primary clipping (6) and Hunterian ligation (1). There were no major complications within the study group.

Conclusions WEB retreatments were successfully performed by a variety of techniques, including stent-assisted coiling, clipping, and flow diversion as the most common. These procedures were performed safely with subsequent obliteration of most aneurysms. The potential need for retreatment of aneurysms should be considered during primary WEB treatments.

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WEB Retreatment Strategies

Abstract LB-009 Figure 1

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Abstract LB-009 Figure 2