guidewire activity happens, all procedures were divided into 4 stages; i) Access to Aortic Arch, ii) Crossing the Valve and Valvuloplasty, iii) Valve Positioning and Implantation, and iv) Removal of Delivery System. Total emboli HITS during the procedure as well as during individual stages were recorded.

**Results** Twenty-five patients were prospectively enrolled in our study (mean age=80.3±7.3 years; males=15 [60%]). Cardiovascular comorbidities seen were hyperlipidemia in 20 cases (80%), followed by diabetes in 19 (76%). Coronary artery disease was seen in 16 cases (64%) as well. Five patients (20%) had a prior history of stroke or stroke mimics. Mean aortic valve area was 0.82 cm² with a mean peak velocity of 3.01 ±1.15. Balloon assisted valvuloplasty was performed in 3 cases (12%). Cerebral sentinel protection device was used in 12 cases with the rest 13 done with embolic protection. A significantly lower emboli count was seen in cerebral protection group (470.38 vs. 693.33 P=0.01). Valve positioning and implantation were found to be significantly different as well (249.92 vs. 387.5 P=0.01) (Table 1). No stroke events were recorded immediately post-procedure and on 30-day follow-up.

**Conclusion** In this study, we report our experience using a Robotic Transcranial Doppler (TCD) with Artificial Intelligence as a novel real-time intraoperative neuromonitoring tool in patients undergoing TAVR. By reporting quantity and distribution of high intensity transient signals (HITS) as markers of microemboli during the procedure, we report significantly lower HITS using sentinel cerebral protection. We also identify valve positioning and implantation as the most significant stage in terms of HITS during the procedure.

**Abstract E-142 Table 1** Emboli HITS during critical phases of the procedure

<table>
<thead>
<tr>
<th>Procedure Stage</th>
<th>With Cerebral Protection Device (n=13)</th>
<th>Without Cerebral Protection Device (n=12)</th>
<th>P-Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Access to Aortic Arch</td>
<td>68.23 (SD ± 40.83)</td>
<td>57.08 (SD ± 53.31)</td>
<td>0.5611</td>
</tr>
<tr>
<td>Crossing the Valve and Valvuloplasty</td>
<td>151.15 (SD ± 116.19)</td>
<td>101.08 (SD ± 91.52)</td>
<td>0.2301</td>
</tr>
<tr>
<td>Valve Positioning and Implantation</td>
<td>249.92 (SD ± 107.64)</td>
<td>387.5 (SD ± 160.67)</td>
<td>0.01*</td>
</tr>
<tr>
<td>Removal of Delivery System</td>
<td>8.0 (SD ± 10.61)</td>
<td>11.67 (SD ± 9.57)</td>
<td>0.3751</td>
</tr>
<tr>
<td>Total Count (Mean)</td>
<td>470.38 (SD ± 215.96)</td>
<td>693.33 (SD ± 192.91)</td>
<td>0.01*</td>
</tr>
</tbody>
</table>

**Disclosures** A. Baig: None. C. Manion: None. V. Iyer: None. W. Khawar: None. B. Donnelly: None. A. Monteiro: None. E. Levy: 2; C: Claret Medical, GLG Consulting, Guidepoint Global, Imperative Care, Medtronic, Rebound, StimMed.; 4; C: NeXtGen Biologics, RAPID Medical, Claret Medical, Cognition Medical, Imperative Care (formerly the Stroke Project), Rebound Therapeutics, StimMed, Three Rivers Medical.; A. Siddiqui: 2; C: Amnis Therapeutics, Boston Scientific, Canon Medical Systems USA Inc., Cerebrotech Medical Systems Inc., Cerenovus, Corindus Inc., Endostream Medical Ltd., Imperative Care, Inc. Integra LifeSciences C. 4; C: Adona Medical, Inc, Amnis Therapeutics, (Purchased by Boston Scientific October 2017), Blink TBI Inc., Buffalo Technology Partners Inc., Cerebrotech Medical Systems, Inc., Cognition Medical, Endostrea.

**Abstract E-143 Figure 1**

**Introduction** Stent-assisted coiling of wide neck bifurcation aneurysms in the anterior communicating artery and basilar tip region is performed utilizing various single and multi-stent configurations. One common configuration is the Y-stent configuration. While the safety and efficacy of Y-stenting have been studied, risk factors for the need for later Y-stenting remain unknown.

**Materials and Methods** Clinical and angiographic data were retrospectively obtained for patients that underwent stent-assisted coiling at our center. Patients were included in this study if stent-assisted coiling was performed using current generation Neuroform Atlas or LVIS Jr stents. A multivariate logistic regression was performed to measure the influence of aneurysm neck size, aneurysm dome to neck ratio, aneurysm location, and initial stent selection on the need for Y stenting.

**Results** Stent-assisted coiling was attempted to treat 82 aneurysms in 81 patients during the study period. Technical complications occurred in 7.3% (6/82) of stent-assisted coiling procedures, and clinical complications occurred following 6.1% (5/82) of procedures. In multivariate analysis, larger aneurysm neck size was associated with increased probability of needing Y-stenting (OR 1.85, 95% CI 1.18 - 2.89). No other factors were associated with increased risk of needing Y-stenting for successful stent-assisted coiling.

**Conclusion** Aneurysms with larger neck sizes are more likely to require Y-stenting when treated with stent-assisted coiling. Further study is necessary to optimize stent selection to
improve technical feasibility of procedures, reduce procedural times, and minimize procedural costs.

Disclosures D. Lauzier: None. B. Root: None. J. Osbun: 2; C; Medtronic, Microvention. A. Chatterjee: None. C. Moran: 2; C; Medtronic, Cer Ravenus. A. Kansagra: 2; C; Microvention, Penumbra.

E-144 TREATMENT OF WIDE-NECKED BIFURCATION ANEURYSMS WITH THE ECLIPS DEVICE: FIVE YEAR EXPERIENCE OF A SINGLE CENTER

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Abstract E-144 Figure 1

Conclusion Our series demonstrates occlusion rates that are similar to standard stent-assisted coiling and intrasaccular flow diversion for wide-necked bifurcation aneurysms. Larger registry-based studies are necessary to support our findings.

Disclosures J. Diestro: 6; C; Medtronic Honorarium. M. Keough: None. R. Ashforth: None. M. Chow: None. J. Rempel: None. T. Marotta: 4; C; Evasc Medical Systems. C. O’Kelly: None.

E-145 COLLATERAL PATTERNS IN LARGE VESSEL OCCLUSION STROKE AND OUTCOMES AFTER ENDOVASCULAR THROMBECTOMY

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Abstracts

Introduction Endovascular thrombectomy (EVT) has revolutionized large vessel occlusion (LVO) stroke care. However, treatment decisions and prognostication are challenging when advanced imaging is unavailable. We sought to determine the relationship of presentation simple CTA collateral patterns and outcomes after EVT.

Methods We identified patients with anterior circulation LVO who underwent guideline-based EVT from 2019 to 2020 at a single referral center. Inclusion criteria were available CTA for retrospective review and 90-day modified Rankin Scale (mRS) score. Arterial phase CTA collateral patterns were categorized as malignant, other, or symmetric.

Results Among 74 patients, the median age was 75 (IQR 58–82), and 49% were female. Collaterals were symmetric (56%), malignant (24%), or other (39%). Comparing collateral patterns, there were no differences in demographics, risk factors, time from last known well, thrombolysis treatment, TICI 2b-3 reperfusion, or intracerebral hemorrhage. Median NIHSS was 18 (14–23) for malignant, 19 (12–22) for other, and 11 (8–18) for symmetric (p=0.02). Intracranial ICA occlusions were present in 28% of malignant, 3% of other, and 11% of symmetric (p=0.04). Ninety-day mRS ≤2 was achieved in 17% of malignant, 38% of other, and 67% of symmetric. Collateral pattern was an independent determinant of 90-day mRS ≤2 (aOR=6.62, 95%CI=2.24,19.53; p=0.001) in a multivariable model controlling for age, NIHSS, baseline mRS £3, thrombolysis, occlusion location, and TICI 2b-3 reperfusion.

Conclusions Collateral pattern is a robust determinant of 90-day outcomes after EVT. It may help guide EVT decisions in the delayed window, especially when there are delays to treatment such as those related to patient transfer. Further prospective studies are needed to evaluate the role of collateral pattern in treatment decisions and prognostication.


E-146 RETROSPECTIVE ANALYSIS OF THREE FLOW-DIVERTER STENT EXPOSURE AND EFFICACY

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Abstracts

Background Flow-diverter stents (FDSs) are one method for the embolization of cerebral aneurysms. Our study compared the performance of three flow-diverter stents.