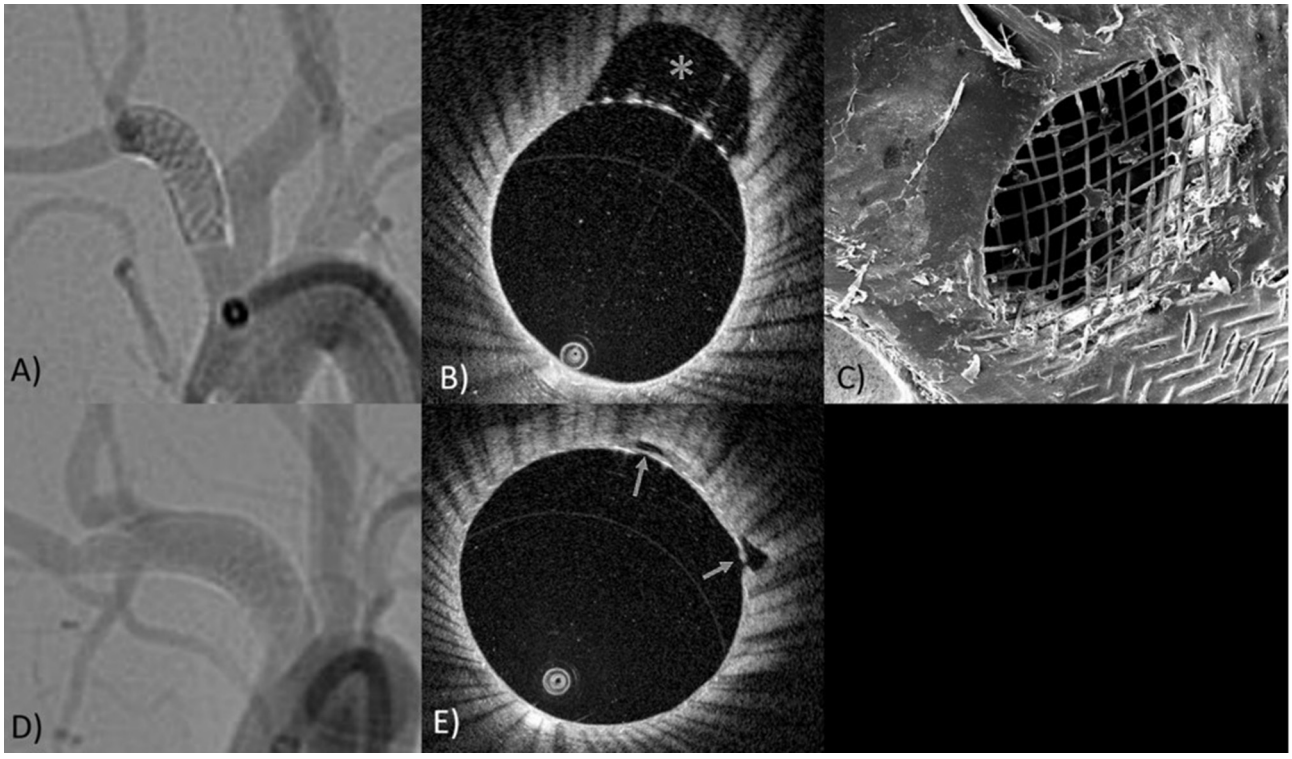

Abstract P-026 Figure 1 Top row: DSA of a 60-day follow up, showing a fully occluded aneurysm (**A**). Corresponding HF-OCT, showing that the aneurysm was in fact not occluded (**B**); the aneurysm remnant is visible between 11 and 2 o'clock (*). SEM of the neck of the aneurysm, confirming the HF-OCT results (**C**) Bottom row: DSA at 15 days follow up of a fully occluded aneurysm (**D**). Corresponding HF-OCT showing evidence that the aneurysm is not occluded (**E**). The two arrows indicate two small remnants at the shoulders of the aneurysm's neck.

cerebrovascular anatomy with a spatial resolution approaching 10 microns. In this study, we sought to compare HF-OCT with state-of-the-art DSA for the in vivo evaluation of complete aneurysm occlusion.

Methods Flow diverters were implanted in 15 rabbits, at least 21 days after a standard elastase aneurysm creation. Six of the rabbits were imaged at 15 days post implant, including both DSA and HF-OCT to assess healing of the aneurysm. The remaining 9 rabbits were allowed to heal for 60 days, at which point they also received HF-OCT. Finally, the rabbits were euthanized, perfused with formalin, and the aneurysms were explanted for histological analysis.

Results Fifteen days following implant, one aneurysm was seen to be fully occluded on DSA, but HF-OCT demonstrated an aneurysm remnant, and the struts remained uncovered (figure 1D-E). At 60 days post-implant, another aneurysm appeared fully healed on DSA, yet HF-OCT demonstrated that the aneurysm remained in communication with the parent artery (figure 1A-B). This observation was later confirmed on SEM (figure C).

Conclusions Preliminary evidence is presented showing that DSA alone is insufficient to confirm complete aneurysm occlusion. HF-OCT may reliably show parent artery remodeling and inform patient-specific decisions regarding duration of DAPT.

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Disclosures R. King: None. **M. Marsofoi:** None. **E. Langan:** None. **M. Shazeeb:** None. **G. Ughi:** 4; C; Gentuity LLC. 5; C; Gentuity LLC. **C. Raskett:** None. **A. Puri:** None. **M. Gounis:** None.

P-027 CORRELATION OF MULTIMODALITY INTRAOPERATIVE NEUROMONITORING TO PERIOPERATIVE ISCHEMIC EVENTS AND POSTOPERATIVE OUTCOMES DURING 2278 CEREBRAL NEUROENDOVASCULAR PROCEDURES

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Introduction Intraoperative neuromonitoring (IONM) is being increasingly utilized during cerebral neuroendovascular procedures to improve patient safety, but empirical evidence regarding the diagnostic accuracy and clinical impact of IONM is still needed.

Methods A multi-institutional database of 2278 cerebral neuroendovascular procedures utilizing multimodality IONM was reviewed. All procedures utilized electroencephalography and somatosensory evoked potentials, and a subset also included motor evoked potentials (MEPs). IONM alerts were categorized as either a significant attenuation or complete loss of response. Retrospective review was used to identify perioperative arterial complications associated with IONM changes which were subcategorized as due to rupture, embolus, instrumentation, or vasospasm. Odds Ratios (OR) for new postoperative deficits were calculated as a function of the type of complication, magnitude of IONM signal change, and signal status at closure. Diagnostic accuracy was measured using sensitivity, specificity, and positive and negative likelihood ratios (PLRs and NLRs).

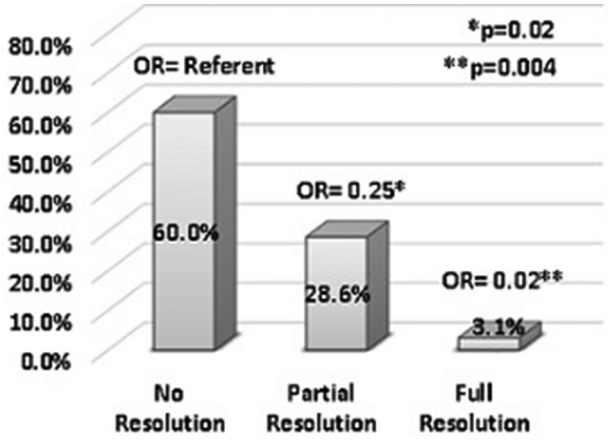
Results Overall, IONM was highly accurate in diagnosing evolving neurological injury for either the MEP or non-MEP cohorts (table 1). Relative to cases with no alerts, the odds of

Abstract P-027 Table 1 IONM Alert and Diagnostic Information for All Procedures and 2 Cohort Subgroups

Category	All Procedures	No MEP Cohort	MEP Cohort
True Negatives (n)	2200	1474	726
False Positives (n)	51	27	24
True Positives (n)	24	12	12
False Negatives (n)	3	2	1
Cases with alerts, n (%)	120 (5.2%)	68 (4.5%)	52 (6.8%)
Sensitivity-% [95% CI]	88.9 [70.8,97.7]	85.7 [57.2,98.2]	92.3 [34.0,99.8]
Specificity-% [95% CI]	97.7 [97.0,98.3]	98.2 [97.4,98.8]	96.7 [95.3,97.9]
PLR- Value [95% CI]	39.2 [29.0,53.1]	47.7 [31.0,73.3]	28.9 [18.9,44.1]
NLR- Value [95% CI]	0.11 [0.04,0.33]	0.15 [0.04,0.52]	0.08 [0.01,0.52]

Abstract P-027 Table 2 Odds Ratios (OR) for New Deficit Based on Signal Change and Complication. Odds Ratio referent was c

Cause of Change	Attenuation- OR [95% CI]	Loss -OR [95% CI]
Any Complication (n=83)	210.9* [44.3,1003.5]	1437.3* [297.3,6948.2]
Rupture (n=16)	808.5* [105.1,62220.8]	8624.0* [708.7,10494.8]
Embolus (n=22)	308.0*[37.9,2504.]	924.0* [158.3,5392.1
Instrumentation (n=38)	34.8** [3.1,393.6]	539.0* [60.2,4824.5]
Vasospasm (n=7)	808.5* [105.1,6220.8]	N/A



Abstract P-027 Figure 1 Rate and Odds Ratios (OR)for New Deficit After IONM Change Associated with Perioperatve Arterial Complication as a Function of the Resolution of the Change.

a new deficit significantly increased as a function of the magnitude of IONM change and type of complication (table 2). For procedures with changes associated with a perioperative complication (n=83), the rate of new neurologic deficit was 60% if the change remained unresolved (n=18/30). However, the rate and risk of new deficit was significantly decreased if a change was partially resolved (28.6%, n=6/21, OR=0.27), and was dramatically decreased if fully resolved (3.1%, n=1/32, OR=0.02) (figure 1).

Conclusions IONM has excellent diagnostic accuracy during cerebral neuroendovascular procedures. Both the magnitude and putative cause of IONM change provide diagnostic and prognostic information. Perioperative complications are significantly less likely to result in postoperative dysfunction if there is a timely diagnosis and intervention that results in the resolution of IONM signal change.

Disclosures W. Wilent: None. **S. Tjoumakaris:** None. **P. Jabbour:** None. **M. Gooch:** None. **R. Rosenwasser:** None. **W. Kim:** None. **J. English:** None. **O. Belyakina:** None. **E. Korsgaard:** None. **J. Cohen:** None. **A. Sestokas:** None.

P-028 WEB COLOMBIAN MULTICENTER EXPERIENCE (WEB. COM) : CLINICAL AND RADIOLOGICAL MID- TERM RESULTS IN THE TREATMENT OF INTRACRANIAL ANEURYSMS

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Introduction Woven EndoBridge (WEB) is a novel device for the treatment of ruptured and unruptured bifurcation aneurysms. To our knowledge none experience in Latin America has been reported. In the present study, we present a multicenter early experience and mid-term follow data for patients treated with WEB.

Materials and methods 32 consecutive patients with 33 intracranial aneurysms underwent endovascular treatment using WEB between March 2016 and February 2019 in four different centers and cities. We retrospectively evaluated the angiographic results at the end of the procedure and at follow-up, technical considerations, the clinical status and complications. **Results**

All attempted cases were treated, but one. Non procedural rupture was recorded. Aneurysm locations were internal carotid artery bifurcation (n=6), middle cerebral artery (n =17), anterior communicating artery (n= 4), Basilar Trunk (n =1) and basilar tip (n= 5). Eight patients were treated in the setting of acute subarachnoid hemorrhage. 1.12 Devices per aneurysm. 32 of 33 cases treated with web without coils. In five cases was necessary additional stenting- 15%. 16/29 with angiographic follow-up, complete occlusion A-B in 15/16. Procedural mean time 17 min. **Conclusion**

This series is at the moment the only, multicenter, Latin American experience of patients treated with WEB. The treatment shows a good safety and efficacy in the endovascular treatment of WNB intracranial aneurysms.

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P-029 LONGITUDINAL MONITORING OF FLOW-DIVERTING STENT TISSUE COVERAGE AFTER IMPLANT USING NEUROVASCULAR HIGH FREQUENCY OPTICAL COHERENCE TOMOGRAPHY

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Introduction High frequency optical coherence tomography (HF-OCT) is an intra-vascular imaging modality designed for cerebrovascular anatomy. With a spatial resolution approaching