

incorporated a shear-thinning and viscosity-matched blood analog.

Results All catheter combinations resulted in significant flow reduction in the affected middle cerebral artery (MCA) using standard 8F guide catheters in the L-ICA and 6F aspiration catheters in the L-MCA (figure 1C). However, Zoom-88 placement within the L-MCA resulted in the greatest flow reduction (real-time flow measurement verified with fluoroscopy, figure 1B).

Conclusion The benchtop flow model provided physiologically-relevant vessel tortuosity, hemodynamics, and vessel material characteristics. The resulting quantification of the intracranial flow effects in the vessel branches during aspiration catheter placement provides valuable information regarding flow through the CW in the left-sided vasculature for comparison to placement in the right-side of the brain.

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E-071

MECHANICAL THROMBECTOMY FOR ISOLATED POSTERIOR CEREBRAL ARTERY OCCLUSION STROKE: SYSTEMATIC REVIEW AND META-ANALYSIS

¹J Sequeiros*, ²M Padilla, ³F Terry, ⁴M Cabanillas, ⁵E Gaudio, ⁵H Zaver, ⁶C Alva, ¹V Inoa, ¹B Krishnaiah, ⁷N Goyal. ¹Neurology, University of Tennessee Health Science Center, Memphis, TN, USA; ²Sociedad Científica Huachana de Estudiantes de Medicina, Universidad Nacional San Luis Gonzaga de Ica, Lima, Peru; ³University of San Martin de Porres, Facultad de Medicina, Lima Peru, Lima, Peru; ⁴Universidad Nacional Mayor de San Marcos, Facultad de Medicina, Lima, Peru; ⁵University of Tennessee Health Science Center, College of Medicine, Memphis, TN, USA; ⁶Grupo de Investigación Neurociencia, Efectividad Clínica y Salud Pública., Scientific University of the South (Universidad Científica del Sur), Lima, Peru; ⁷Neurology, University of Tennessee Health Science Center and Semmens Murphey Clinic, Memphis, TN, USA

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Introduction Recent data showed benefit from MT for medium vessel occlusion. Few data are available for isolated posterior cerebral artery (PCA) occlusion stroke. PCA (including P1) is considered a medium vessel for most interventionalists.

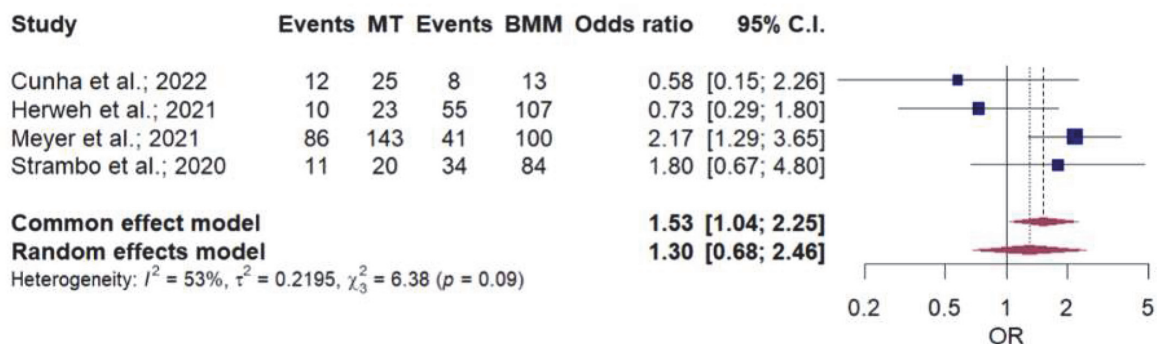
Objective The purpose of this systematic review and meta-analysis was to assess all the available evidence on the efficacy and safety of MT techniques for the treatment of isolated PCA occlusion stroke.

Methods We used PRISMA guidelines to report our search results. Searches were conducted using the PubMed/Medline, Scopus, Embase, and Cochrane databases up to October 2022, including randomized clinical trials (RCT) and observational studies that included mechanical thrombectomy for isolated PCA strokes. Our primary outcome was functional independence, defined as modified Rankin Scale score (mRS): 0-2. Secondary outcomes were successful revascularization defined mTICI >=2b, excellent outcome (mRS:0-1), type of device used, 90 days mortality, symptomatic intracranial hemorrhage (sICH) and all ICH. We performed a meta-analysis using the random effect model. Pooled proportions were calculated. A sensitivity analysis based on the MT technique was also performed for all outcomes. We conducted the meta-analyses using random-effects models and assessed the certainty of evidence using the GRADE approach. Statistical heterogeneity across studies was assessed with I2 statistics and accounted for with subgroup and meta-regression analyses.

Results *Mechanical thrombectomy alone:* Thirteen studies (n=463) showed results of patients who underwent MT. Pooled proportions after random analysis were 54.63% [95% CI: 49.20-59.94]%; I²=16%) for functional independence, 12.18 [95% CI: 7.84-18.42]%; I²=50%) for mortality at 90 days was and 4.15% [95% CI: 2.17-7.80]%; I²=0%) for symptomatic ICH. Excellent outcome (mRS:0-1) was reported in 6 studies with a pooled proportion of 39.75% [95% CI: 29.14-51.42]%; I²=65%). Heterogeneity was substantial between studies. *Mechanical Thrombectomy versus best Medical Management:* Four studies showed a comparison between MT versus best medical management (MM). After random effect analysis patients who underwent MT presented similar chances to achieve functional independence: OR 1.30 [95% CI 0.68-2.46; I²=53% (p=0.09)], 90-days mortality: OR 1.20

Metanalysis of Odds ratio

mRS 0-2 at 90-day FU



Abstract E-071 Figure 1

[95% CI 0.65-2.21; $I^2=0\%$ ($p=0.87$)], and symptomatic ICH: OR 1.64 [95% CI 0.78-3.45; $I^2=40\%$ ($p=0.19$)]. Baseline characteristics were similar in both groups.

Conclusion Our results suggest that MT for isolated PCA occlusion stroke is feasible. However, when compared with best medical management there is no difference in functional independence, 90-days mortality or symptomatic ICH. Given the limitations of our results, further confirmation in well-designed RCTs is needed.

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E-072 EFFICACY OF A MODERN AVM CLASSIFICATION SYSTEM THAT DIRECTS CURATIVE ENDOVASCULAR THERAPIES ACCURATELY

W Yakes*. *Vascular Malformation Center, Englewood, CO, USA*

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Purpose To determine if AVM angioarchitecture characteristics that can be predictive and direct specific curative endovascular procedures accurately and consistently to cure high-flow malformations in all anatomic locations.

Material and Methods Angiographic analysis of high-flow AVMs determined 4 major angioarchitectures. Type I: Direct arterial/arteriolar to vein/venule connection; e.g., as commonly seen in pulmonary AVF, congenital renal AVF, etc. Type II: Arterial/arteriolar connections to a 'nidus' that then have several out-flow veins with no intervening capillary beds in any of the vascular interconnections. Type IIIa: Arterial/arteriolar connections to an aneurysmal vein ('nidus' is the vein wall) that drains into a dominant out-flow vein with no intervening capillary bed in these connections. Type IIIb: Same angioarchitecture as Type IIIa, except that there are more than one (several) out-flow veins. Type IV: 'Infiltrative' form of AVM whereby innumerable micro-arteriolar branches fistulize through a tissue (e.g., ear AVMs) totally infiltrating it, shunting into multiple out-flow veins. Capillary beds also exist in the tissue and are admixed with the innumerable AVFs. Without the capillaries the tissue could not be viable, therefore must be present.

Results Type I: Can be effectively treated with mechanical devices; e.g., coils, Amplatzer Plugs, etc. Type II: Can be effectively treated with ethanol embolization; trans-cath and direct puncture. Type IIIa: Can be effectively treated by transcatheter ethanol, retrograde vein catheter access or direct puncture access of the aneurysmal vein and treatment with ethanol and coils, or even by coils alone. Type IIIb: Can be effectively treated as above, but can be more challenging by the vein route as more veins (not a single out-flow vein) require closure. Type IV: Can be effectively treated by transcatheter or direct puncture of the innumerable microfistulous AVFs by embolization with 50% -50% ethanol non-ionic contrast mixture.

Conclusions This newly reported AVM Classification system has a direct impact on determining the curative endovascular and direct puncture embolization procedures and also determines the embolic agents that will successfully treat and cure complex AVMS in all anatomies.

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E-073 ACUTE LOADING DOSES OF ANTIPLATELETS AND LONG-TERM ANTIPLATELETS REGIMEN IN STENT-ASSISTED REPAIR OF INTRACRANIAL ANEURYSMS

¹Y Lodi*, ²V Reddy. ¹Neurology, Neurosurgery and Radiology, Upstate Medical University, Johnson City, NY, USA; ²Neurology, Neurosurgery and Radiology, Upstate Medical University/MVHS, Johnson City, NY, USA

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Introduction Thromboembolic event (TEE) remains the main perioperative challenge in addition to potential intracranial hemorrhage (ICH) in stent-assisted repair of intracranial aneurysms (SARIA) or flow diversions (FD) for cerebral aneurysm. There are no standard antiplatelet strategies. Based on the data, antiplatelets effect are more pronounce within the first 4 hours after administration.

Objectives To evaluate if the acute loading doses of aspirin and clopidogrel (LDAC) followed by long-term antiplatelets regimen in SARIA have any immediate and long-term effects on TEE and ICH.

Methods Consecutive patients underwent SARIA using loading dose of aspirin 324 mg (4 baby aspirin) and clopidogrel 300 mg 2 to 4 hours before the procedure were enrolled from 2011 to 2022 prospectively. Continuation of both full dose aspirin and clopidogrel for 30 days followed by 81 mg of aspirin and 75 mg of clopidogrel for additional 9 months, and after 9 months, 325 mg aspirin only. Patients demographics including intra-operative and post operative events were recorded. Outcome was measured using modified Rankin Scale (mRS) score.

Results 112 patients (baseline mRS 2 in 6, mRS3 in 1) with mean age of 53 ± 13 underwent SARIA (7 ruptured and 55 symptomatic). Aneurysms are; Right internal carotid artery (ICA) 27, left ICA 35, middle cerebral artery 25, basilar artery 19 and anterior communicating artery 6. Stent deployment was achieved in all. There was no intra-operative rupture or ICH. A small perioperative left hemispheric subarachnoid hemorrhage was observed on a right MCA aneurysm on day 3 after discharged, which resolved spontaneously without requirement of stopping antiplatelet. Intra-operative asymptomatic stent thrombosis developed in one; treated with intraarterial integrilin followed by intravenous infusion resulting. Post-operative symptomatic TEE were observed in 2 cases (2%); first was on day 2 in a giant right ICA aneurysm with NIHSS 6 and who recovered completely (NIHSS 0, mRS 1) in 90 days. 2nd event was a visual distortion and diplopia (NIHSS 0) developed on day 2 in a basilar artery aneurysm, which resolved completely and return to her nursing job. All ruptured and symptomatic aneurysms were secured and there are no subarachnoid hemorrhages during long follow-up period. Immediate complete and near complete obliteration of aneurysm was observed in 72% and subtotal in 28%. There was no mortality or permanent disability in our series. 90 days mRS 0 and 1 was observed in 98 (92.5%) and mRS 2 in 6 (5.7%) at baseline, mRS 3 in 2 (1.9%); one LICA ruptured with initial H&H IV improved to IIB, and treated. Second case baseline mRS 3 from previously ruptured and clipped RMCA aneurysm. 12 months mRS 0 and 1 in 98 (92.5%), mRS 2 in 7 (6.6%) and mRS 3 in 1 at her base line.

Conclusions Our study revealed that LDAC in SARIA is associated with a low immediate and long-term TEE without added risk of ICH and good outcome with no mortality or permanent disability. Our antiplatelets regimen may be an