Background Endovascular treatment (EVT) for stroke due to medium vessel occlusion (MeVO) can be technically challenging and specific endovascular tools are needed to safely and effectively recanalize these relatively small and fragile vessels. We aimed to gain insight into availability and desired qualities of endovascular devices used in MeVO strokes and examined barriers to adoption of MeVO EVT in clinical practice on a global scale.

Methods We conducted a case-based international survey among neurointerventionalists. Participants were asked about their preferred first-line technical EVT approach for 7 MeVO stroke scenarios and whether they felt appropriate endovascular tools for MeVO strokes exist and are available to them in their clinical practice. We then examined barriers to adopting MeVO EVT and analyzed them by geographic regions.

Results A total of 263 neuro-interventionists participated, of which 178 [67.7%] provided free text responses on desired qualities of MeVO EVT tools. The majority 121/178 [68%] felt that there was substantial room for improvement regarding existing tools. A large proportion (131/178 [73.6%]) felt they had appropriate access to existing tools. The most commonly mentioned barrier for adopting MeVO EVT in North America was ‘waiting better tools’ (9/28 responses [32.1%]), while awaiting better evidence (8/26 responses [30.8%]), and the need for improved ‘Funding’ 7/26 responses [26.9%]) were the most important barriers in Europe. Those suggesting quality improvements to stent retrievers were much more likely to use them over aspiration devices as their first-line approach (IRR 1.90 $p$=0.006). In the setting of low availability, operators were much more likely to use a stent-retriever alone (IRR 14.20 $p$=0.005).

Conclusions The majority of neurointerventionalists felt that dedicated endovascular tools for MeVO EVT can be substantially improved upon. Different world regions face various challenges in adoption of MeVO EVT, but overall, the most important perceived barrier was the fact that physicians are still awaiting better MeVO EVT tools.


### P-034 COMMON DATA ELEMENTS REPORTED ON MIDDLE MENINGEAL ARTERY EMBOLIZATION IN CHRONIC SUBDURAL HEMATOMA: AN INTERACTIVE SYSTEMATIC REVIEW OF RECENT TRIALS

Background Cross-study heterogeneity has limited the evidence-based evaluation of middle meningeal artery embolization (MMAE) as a treatment for chronic subdural hematoma (CSDH). Ongoing trials and prospective studies suggest that heterogeneity in upcoming publications may detract from subsequent meta-analyses and systemic reviews. This study aims to describe this data heterogeneity in order to promote harmonization with common data elements (CDEs) in publications.

Methods ClinicalTrials.gov and PubMed were searched for published or ongoing prospective trials of MMAE. The Nested Knowledge AutoLit living review platform was utilized to classify endpoints from randomized control trials (RCT) and prospective cohort studies comparing MMAE to other treatments. The Qualitative Synthesis feature was used to determine cross-study overlap of outcome-related data elements.

Results Eighteen studies were included twelve RCTs, two non-randomized controlled studies, two prospective single-arm trials, one combined prospective and retrospective controlled study, and one prospective cohort study. The most commonly reported data element was recurrence (15/18), but seven heterogenous (non-comparable) definitions were employed for ‘recurrence.’ Mortality was reported in 10/18 studies, but no common timepoint was reported in more than four studies. Re-intervention and CSDH volume were reported in eight studies, CSDH width in seven, and no other outcome was common across more than five studies.

Conclusions There was significant heterogeneity in data element collection even among prospective, registered trials of MMAE. Even among CDEs, variation in definition and timepoints prevented harmonization. A standardized approach based on CDEs may be necessary to facilitate future meta-analyses and evidence-driven evaluation of MMAE treatment of CSDH.

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