

properties. Diverging from other stents, it provides broader metal coverage, suggesting a potential flow diversion effect. The Accero stent is appraised as a stent with myriad advantages, marking a significant stride in vascular intervention.

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#### RETROSPECTIVE ANALYSIS OF CLINICAL AND PROCEDURAL OUTCOMES BASED ON GUIDE CATHETER, ASPIRATION CATHETER, AND STENT-RETRIEVER SELECTION

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**Introduction** Since the introduction of first-generation stent retrievers and catheters for mechanical thrombectomy (MT), devices have improved rapidly with the goal of maximizing recanalization rates and reducing complications. Choosing a particular device is typically guided by surgeon preference and experience. Though improved outcomes have been demonstrated with the use of balloon guide catheters (BGC) compared with other guide catheters, data comparing outcomes with FDA-approved devices in other device classes, such as aspiration catheters (AC) or stent-retrievers (SR), are limited. In the present study, we sought to retrospectively compare clinical and procedural outcomes among our cohort of acute ischemic stroke (AIS) patients treated with various guide catheters, aspiration catheters, and stent retrievers during MT.

**Methods** We conducted a retrospective analysis of a randomly selected cohort of MT patients with large or medium vessel occlusions presenting to two comprehensive stroke centers between August 2021 and August 2023. We compared clinical and procedural outcomes among patients treated with commonly used guide catheters, intermediate/aspiration catheters, and stent retrievers. Outcomes included successful reperfusion (defined as mTICI  $\geq$  2b), postprocedural intracranial hemorrhage (ICH) (including any intraparenchymal hemorrhage or subarachnoid hemorrhage), new territory emboli on post-operative imaging, 90 day modified Rankin Score (mRS), mortality, and mean arterial access to reperfusion time.

**Results** There were a total of 154 cases included in this analysis. With respect to guide catheter usage, 111 (72%) cases involved use of balloon guide catheters. In terms of reperfusion rates, postprocedural ICH, mortality, mean time between arterial access and reperfusion, and good 90-day mRS (mRS 0–2), there were no statistically significant differences between cases in which BGCs were used versus other guide catheters. In terms of the aspiration/intermediate catheters, among the 150 cases in which ACs were employed, the most common were the Catalyst (50%), Zoom (31%), Vecta (7%), and Cerenovus large bore catheter (4%). We found no significant differences in 90-day mRS, mortality, ICH, new territory emboli, or procedural time amongst these cases. However, there were significant differences in successful reperfusion between the various aspiration catheters, with Zoom achieving the highest (93.6%), followed by Catalyst 5/6/7 (88%), Cerenovus large bore catheter (66.7%), Vecta (63.6%), and all others (63.6%) ( $p=0.012$ ). Of 79 cases wherein stent retrievers were used, the most commonly used devices were Trevo (35%), Embotrap (24%), Solitaire (22%), and

Tigertriever (14%); there were no differences in the clinical and procedural outcomes assessed between SRs.

**Conclusion** In this retrospective analysis of MT cases for AIS, we demonstrated no significant differences in most clinical or procedural measures when comparing various FDA-approved guide catheters, aspiration catheters, or stent-retrievers. Notably, the Zoom aspiration system was associated with higher successful recanalization rates compared to other commonly used ACs in our cohort, possibly related to its unique angled-tip design. Of course, retrospective comparisons such as this are inherently limited. Larger scale comparisons, ideally in a prospective manner, may be helpful in informing ideal device design to maximize recanalization rates and minimize complications.

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#### IMPACT OF WEEKEND PRESENTATION ON PATIENT FUNCTIONAL OUTCOMES AT 3 MONTHS FOLLOW-UP AND THE MODALITY OF TREATMENT IN ANEURYSMAL SUBARACHNOID HEMORRHAGE

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**Background** While endovascular procedures can be performed by neurosurgeons and neuroradiologist compared to microsurgery that can only be performed by neurosurgeons, we hypothesize that patients with aneurysmal subarachnoid hemorrhage on weekdays have better functional outcomes on follow-up compared to those treated on weekends.

**Objective** Compare functional outcomes up to 3 months of follow-up in patients treated on weekends and weekdays for aneurysmal subarachnoid hemorrhage. **Methods:** This is a retrospective review of ruptured aneurysms presenting with aneurysmal subarachnoid hemorrhage on weekdays and weekends between 2017 and 2022 at our institution.

**Results** The study cohort comprised of 583 patients divided into 422 receiving treatments on weekdays vs 161 on weekends. There were no significant differences in patient and aneurysmal characteristics between both cohorts except that mean aneurysm height was significantly higher in the weekday cohort ( $4.5 \pm 2.9$  mm vs  $4 \pm 1.9$  mm,  $p=.02$ ). Functional outcome at discharge, 1 month of follow-up and 3 months of follow-up was comparable between both cohorts. Also, the rate of open and endovascular treatment was comparable between both cohorts (open: weekday 9% vs weekend 6.2%, endovascular: weekday 91% vs weekend 93.8%,  $p=.27$ ). Lastly, the rate of complications, mortality, aneurysmal occlusion, recurrence, and retreatment was comparable between both cohorts.

**Conclusion** Our study demonstrated that treatment of aneurysmal subarachnoid hemorrhage on weekends or weekdays did not affect functional outcome up to 3 months of follow-up. Large tertiary centers with multidisciplinary teams on call are therefore recommended in order to safeguard patient outcomes regardless of admission date.