E-137 ENDOVASCULAR THERAPY DELAY FOR ACUTE LARGE VESSEL OCCLUSION IS ASSOCIATED WITH WORSE FUNCTIONAL OUTCOME AND INCREASED MORTALITY


Introduction The importance of early mechanical thrombectomy (MT) has shown to improve functional outcomes for patients with acute large vessel occlusion (LVO). As well, prior studies have shown that earlier MT resulted in reduced hospital stay, more home-time, and more desirable living situation in the 90 days after stroke.

Hypothesis We hypothesized that delay in MT in patients with LVO would result in worse clinical outcome and increased mortality.

Methods We performed a retrospective analysis of consecutive patients who underwent MT for LVO in a large academic comprehensive stroke center between 01/2018 and 05/2021. We compared outcomes including in-hospital mortality and 90-day modified Rankin Scale (mRS) based on time from door-to-puncture and door-to-reperfusion, adjusting for relevant covariates using logistic regression.

Results Patients that had shorter door-to-puncture time were found to have higher probability of a lower modified Rankin Scale (mRS 0–2) at discharge (p=0.03). Patients with door-to-puncture less than 60 minutes had a probability of 50% of achieving a good outcome. Longer door-to-puncture times were associated with lower probability of achieving mRS 0–2 at discharge. A similar finding was seen in patients that had shorter times to reperfusion (p=0.05). Adjusting for age, baseline NIHSS score, and final TICI score, delayed door-to-reperfusion time in minutes was an independent predictor of increased mortality at 90 days of 9% for every 10 minutes delay (OR 1.009, 95% CI 1.003–1.016, p=0.006). Every 10 minutes delay in door-to-reperfusion time had 7% higher chance of poor functional outcome at 90 days (OR 1.007, 95% CI 1.004–1.019, p=0.015).

Conclusion Shorter times to MT and reperfusion impact functional outcome and mortality in LVO stroke patients. This indicates that an adequate hospital protocol and continuous education may lead to faster and more efficient stroke activations leading to a shorter time to MT and eventual reperfusion. Goals of door-to-puncture must be established in order to achieve better outcomes.


E-138 INTRACEREBRAL HEMORRHAGE IN PATIENTS TRANSFERRED FOR MECHANICAL THROMBECTOMY

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Background A common convention among stroke patients being transferred for mechanical thrombectomy, particularly if intravenous thrombolyis has been given, is to undergo a repeat plain brain CT at the treating stroke center. Given the recently published treatment benefit of patients with low ASPECTS, the primary concern that prompts repeat imaging is the discovery of intracerebral hemorrhage (ICH) prior to thrombectomy. Routinely repeating a plain head CT has raised concerns in previously published series for unnecessarily delaying time to thrombectomy. We aimed to evaluate the value of repeat imaging by determining the actual incidence of any ICH on upon arrival to comprehensive stroke center.

Methods Retrospective review of all patients transferred to a single academic comprehensive stroke center for mechanical thrombectomy. We evaluated for the frequency of repeat imaging, the rate of ICH, the rate of undergoing mechanical thrombectomy and angiographic outcomes.

Results 729 patients were transferred to a single center for mechanical thrombectomy evaluation over the study period (January 1st, 2015, to December 30th, 2021) that met the inclusion criteria. Plain head CT was repeated at the hub hospital in 631/729 (86.6%) patients, 365 (57.3%) of which received IV thrombolysis. A new intracerebral hemorrhage (ICH) was detected in 8 (1.2%) patients. EVT was pursued in 398/631 (63.07%) in the repeat imaging group and 84/98 (85.7%) of those who did not undergo repeat imaging. There was no statistically significant difference in the transfer times between the two groups. Obtaining repeat imaging on arrival was associated with longer door to needle times (19.3 vs 33.1 mins, p<.0001). There was no difference in the rate of TICI 2B or greater recanalization in between groups (93.1% vs 87.2%, p=.059).

Conclusions In a large series of stroke patients being specifically transferred for mechanical thrombectomy, the rate of ICH on arrival to the thrombectomy hospital was 1.2%. In less than 50% of those cases the decision to forgo intervention was related to the ICH finding. The results of our study adds to the concerns that repeat imaging delays treatment by demonstrating that the incidence of ICH is low, which may warrant reconsideration of current stroke workflows for large vessel occlusion transfers.

Disclosures Y. Radaideh: None. K. Joshi: None. M. Chen: None.

E-139 USE OF DRUG-ELUDING, BALLOON-EXPANDABLE RESOLUTE ONYX CORONARY STENT AS A NEW TREATMENT STRATEGY FOR VERTEBRAL ARTERY OSTIAL STENOSIS

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Introduction Extracranial vertebral artery stenosis is the second most common site of stenosis after carotid bifurcation accounting for a high risk of posterior circulation strokes. Due to the high smooth muscle strength, vertebral ostial stenosis is notoriously difficult to treat with high rates of restenosis following revascularization with stenting and angioplasty, along with stent kinking and breakage when using traditional bare metal stents. Given this unique nature of ostial stenosis, we intend to investigate the safety and efficacy of drug-eluding, balloon-expandable Resolute Onyx coronary stent.

Methods A prospectively maintained database was retrospectively searched for consecutive patients diagnosed with vertebral artery ostial stenosis who underwent stenting and angioplasty between January 1, 2015 and January 1, 2022.