for older and larger patients, with proper technical expertise, transfemoral intra-arterial chemotherapy can be considered in such young infants.

Disclosures S. Sur: None. **B. Snelling:** None. **E. Peterson:** None.

E-032 COMBINATION OF HIGH RESOLUTION CONE-BEAM CT AND 3D DSA FOR THE EVALUATION OF INTRACRANIAL STENTS USED FOR ANEURYSM TREATMENT

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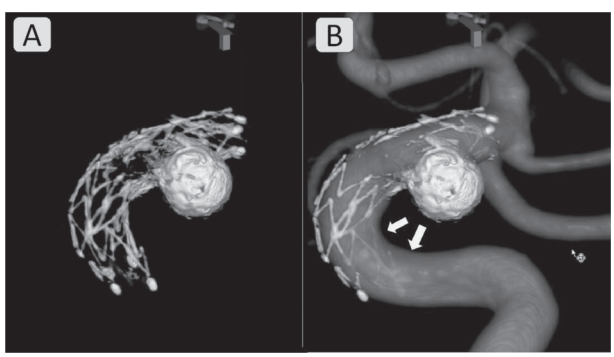
Purpose Incomplete stent apposition after the treatment of brain aneurysm can increase the risk of thromboembolic complications and remains to be the major concern during the procedure. Utilizing the high resolution cone-beam CT (HR-CBCT) and metal artifact reduction software (MAR), the metal artifact produced by the coil mass is reduced and the visualization of the deployed stent is optimized. After combining with the 3D digital subtraction angiography (3D-DSA), the resulting image is used for the evaluation of the stent apposition in the artery. Initial clinical experience of this novel imaging method is reported.

Methods A total of 24 aneurysm patients who underwent the stent assisted coil embolization was selected for this study. All patients were treated using either Neuroform® stent or Enterprise® stent system. Artis PURE® Platform (Siemens) was used in this study. Acquisition protocols are follows. A HR-CBCT acquisition was performed to obtain the image of stent and coil mass. The dataset was then reconstructed using MAR. A 3 D DSA acquisition was performed for the visualization of the vasculature. The two datasets were combined using a dedicated software. A 3D volume rendering (VR) image was created and the stent apposition of each treated patient was evaluated.

Results All 24 patients underwent the image acquisition successfully. Relationship between the deployed stent and the wall of the parent artery was well visualized in every patient although partial image defect of the stent due to the metal artifact was observed in the relatively large aneurysms. The incomplete stent apposition was frequently seen near the carotid siphon, especially at the inner curve of the target vessel.

Conclusion Combination of high resolution cone-beam CT and 3D DSA for the evaluation of intracranial stents provided sufficient visualization of the deployed stent and parent artery. This imaging method can be used for the evaluation of stent apposition during/after the treatment of brain aneurysms.



Abstract E-032 Figure 1

Disclosures I. Yuki: 1; C; Siemens Grant. **S. Hataoka:** None. **T. Ishibashi:** 1; C; Siemens Grant. **C. Dahmani:** 5; C; Employee of Siemens Healthcare. **A. Ikemura:** None. **Y. Kambayashi:** None. **I. Kan:** None. **Y. Abe:** None. **S. kaku:** None. **K. Nishimura:** None. **T. Kodama:** None. **Y. Sasaki:** None. **Y. Murayama:** 1; C; Siemens Grant.

E-033 SOFIA PLUS DISTAL ACCESS CATHETER FOR ACUTE STROKE INTERVENTION-INITIAL SINGLE CENTER EXPERIENCE

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Introduction Endovascular thrombectomy (EVT) for acute ischemic stroke (AIS) has Level 1 evidence for improved patient outcomes compared with standard care. Effective and timely recanalization is of paramount importance to achieve this. The SOFIA Plus distal access catheter (Microvention, Tustin CA) is a newly available large lumen catheter (distal inner diameter – 0.070 inch). We present our initial experience with this device for thrombectomy in acute AIS.

Methods Retrospective analysis of all patients at our center who underwent EVT for AIS using the SOFIA Plus catheter was performed. Demographic, clinical and imaging data, and early follow-up outcomes were analyzed.

Results Nine patients underwent EVT using the SOFIA Plus catheter including 6 males with a median age of 63, and a median initial NIHSS of 18. Location of the large vessel occlusion were as follows: ICA terminus – 3, M1 segment – 4, M2 segment – 1, Basilar – 1. Primary direct aspiration method with the SOFIA Plus catheter was utilized in 7 cases, of which 3 required the use of a stent retriever in subsequent passes. In 2 cases, primary stent retriever plus aspiration via the SOFIA plus catheter technique was used. Median groin puncture to recanalization time was 33 minutes with median first pass to recanalization time of 9 minutes. TICI 2 b-3 recanalization was achieved in 8/9 cases with a median of 2 passes. None of the patients suffered a symptomatic intracranial hemorrhage. Amongst patients in whom follow up data was available, median discharge NIHSS was 4.

Conclusion In our single center experience, the SOFIA plus catheter was technically feasible, safe to use, and achieved high recanalization rates in a timely manner.

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E-034 OUTCOME PREDICTOR FOR MECHANICAL THROMBECTOMY IN ACUTE CEREBRAL ARTERY OCCLUSION

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Background Acute occlusion of a major cerebral artery is associated with high mortality and morbidity. Few data about

prognostic factors for a good outcome are available, although mechanical thrombectomy has significantly advanced over the last 5 years. The aim of this study is to investigate good prognostic factors for an acute occlusion of a major cerebral artery using mechanical thrombectomy.

Methods A single center retrospective analysis of 37 consecutive patients with acute occlusion of a major cerebral artery treated by mechanical thrombectomy with stent retrievers was conducted. Collaterals were assessed by the Thrombolysis in Myocardial Infarction (TIMI), and recanalization was assessed by the Thrombolysis in Cerebral Infarction (TICI) score. Outcome was assessed by National Institutes of Health Stroke Scale (NIHSS) and modified Rankin Scale (mRS) at 90 days.

Results Most patients (27/37) demonstrated good recanalization (TICI 2b or 3) after thrombectomy. At the 90-day follow up, 19 patients had good (mRS, 0−2), 14 had moderate (mRS, 3−4) and four had poor outcomes (mRS, 5−6). Early recanalization, high TIMI, and low baseline NIHSS were closely related to 90-day mRS, whereas high TICI was related to both mRS and the decrease in the NIHSS.

Conclusions NIHSS decreased markedly when recanalization was successful. A good mRS was related to low initial NIHSS and good collateral and early and successful recanalization.

Disclosures S. Park: None.

E-035 SUPERIOR OUTCOMES IN THROMBECTOMY FOR ANTERIOR CIRCULATION LARGE VESSEL OCCLUSION STROKE AMONG LATE MR-SELECTED CANDIDATES COMPARED WITH EARLY CANDIDATES NOT SCREENED WITH MR

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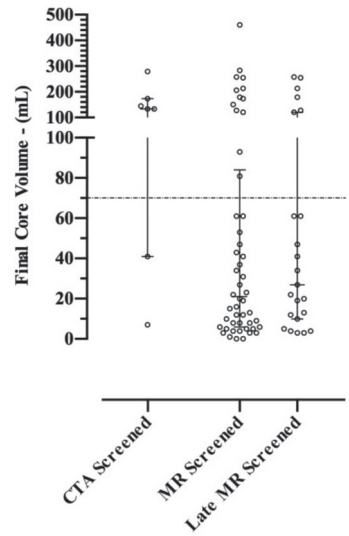
Purpose With thrombectomy for anterior circulation large vessel occlusion (ACLVO) stroke time is considered important, but collateral status may be a greater driver of outcome than time. MR screening can identify good candidates for thrombectomy regardless of time from onset. Here we tested the hypothesis that MR-selected patients would show superior outcomes regardless of time compared with early patients screened by CTA alone.

Methods A cohort of 56 ACLVO patients treated with thrombectomy between 11/1/2012 and 5/15/2015 was retrospectively studied. Seven early-presenting patients with contraindication to MRI proceeded immediately to thrombectomy upon CTA confirmation of LVO. Forty-nine patients with CTA-proven LVO but no MR contraindication went next to MRI and were selected for thrombectomy based on low diffusion-restricted infarct volume (non-intervention threshold: core volume > (100 minus patient age) mL). Final infarct volume was measured on post-treatment imaging. Comparisons were made between early CTA-only-screened and MR-screened groups. Additional comparisons were made with the late MR-screened (decision-to-treat >6 hours from symptom onset) subset.

Results Compared to the MR-screened group, the early CTA-only group had a higher median age (81 [IQR 76–83] vs. 71 [57–77]) and NIHSS score (25 [22–26] v. 15 [11–19]) was more likely to have received IV tPA (71.4% vs. 36.7%) and yielded a lower TICI $\geq$ 2 B recanalization rate (57.1% vs. 79.6%, p = 0.36). Despite significantly earlier treatment decision times (3.0 h [2.5–3.6] vs. 6.4 h [2.9–8.7]), median final infarct volume was larger in the early CTA-only group compared with the MR-selected group (134 mL vs. 20 mL, estimated median final infarct difference of 100 mL [95 CI: 1.00–134], p = 0.043). A similar difference in median final infarct volume was observed between CTA-only and the late MR-screened groups (134 mL v. 27 mL [95 CI: –6 – 132], p = 0.069) (Figure 1). The odds of a final core infarct greater than 70 mL, a poor prognostic factor, were significantly lower in the MR-screened group OR 0.013 ([95 CI: 0.022–0.757], p = 0.022).

Conclusion Despite a median 3.4 hour-shorter interval from symptom onset to treatment decision, ACLVO patients not screened with MRI had larger median final infarct volumes after thrombectomy compared with MR-screened patients. Importantly, late MR-selected patients also tended to have lower final infarct volumes. Consideration should be given to patient selection strategies incorporating MRI with diffusion weighted sequences rather than time from symptom onset alone.



Abstract E-035 Figure 1 Final Infarct volumes in CTA-only versus MR-screened adfter thrombectomy. Median final core volume (mL): CTA-Only, 134; MR-screened, 20; late MR-screened, 27. Proportion of patients with large final core volume (>70 mL): CTA-only, 71.4%; MR-screened, 23.1%; late MR-screened, 26.1%. Dashed line indicates poor outcome final infaract threshold of 70 mL, bars indicate median and IQR.

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E-036 PREDICTING FLOW DIVERTER DEPLOYMENTS AND CLINICAL VALIDATION

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