experimental and theoretical asp-F (obtained by the product of the tip's section area by the vacuum pressure) correlated with tip's distensibility ($r=0.9050$; $P<0.01$), evidencing that ADAPT performance is highly influenced by catheter tip shape-adaptability to the clot and that the effective ID (eff-ID) may differ from the labeled-ID specified by manufacturers. Eff-ID showed the highest correlation with experimental asp-F ($r=0.9944$; $P<0.01$), confirming that eff-ID rather than labeled-ID should be considered to better estimate the device efficiency.

Conclusions Catheter tip distensibility can induce a significant impact on ADAPT performance when retrieving a stiff clot larger than the device ID. Our findings might contribute to optimizing thrombectomy strategies.

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EP51*

BURDEN OF TOUGH TO RETRIEVE CLOTS IN ACUTE ISCHEMIC STROKE: CLINICAL AND ECONOMIC IMPACT OF INCREASING RETRIEVAL ATTEMPTS IN MECHANICAL THROMBECTOMY

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Introduction Emerging data show an association between increased mechanical thrombectomy (MT) passes and poor outcomes in ischemic stroke. Clots that require ≥ 3 passes are more often tough, fibrin-rich thrombi than those retrieved within two passes.

Aims To assess the clinical and economic burden of number of MT passes, we evaluated the odds of achieving successful reperfusion and functional independence in first pass, or 2–3 passes, compared to ≥ 4 passes.

Methods A retrospective observational study was conducted on 857 cases treated with MT from the Irish National Thrombectomy database. Outcomes were 90-day functional independence (mRS 0–2) and successful reperfusion (mTICI 2b–3) stratified by number of passes (1; 2–3; and ≥ 4) with multi-variable regression to adjust for confounding variables. A decision-tree economic model was informed by 90-day mRS: independent (0–2), dependent (3–5), or dead, with literature-derived annual healthcare costs by mRS.

Results The odds of achieving successful reperfusion were significantly higher for 1 vs. ≥ 4 passes (OR 7.19, $p<0.001$); and for 2–3 vs. ≥ 4 passes (OR 3.19, $p<0.001$). The odds of functional independence were significantly higher for 1 vs. ≥ 4 passes (OR 2.51, $p<0.001$); and trended higher for 2–3 vs. ≥ 4 passes (OR 1.49, $p=0.199$). Patients treated with 1 pass

had the lowest annual healthcare costs (\$20,910); 2–3 passes (\$21,999) ≥ 4 passes (\$25,904).

Conclusion Odds of achieving good outcomes decline with MT passes, while care costs increase. Thrombectomy devices that improve interaction with tough clots for rapid and complete retrieval in fewer passes may improve clinical and economic outcomes.

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EP52*

INITIAL EXPERIENCE WITH THE TREVO NXT STENT RETRIEVER

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Background We report our initial experience with a new stent retriever for mechanical thrombectomy of large- and medium vessel occlusions.

Methods We pooled data of four high-volume European stroke centers over the time period from October 2020 to February 2021. Patients were included in our study if the Trevo NXT stent retriever was used as first-line device. Primary endpoints were first-pass near-complete or complete reperfusion, defined as mTICI score of $\geq 2c$. Secondary endpoints were final reperfusion, National Institutes of Health Stroke Scale (NIHSS) at 24 hours and discharge, device malfunctions, complications during the procedure and subjective ratings of the interventionalists regarding device functionality.

Results Eighty patients (39 women, mean age 74 ± 14 years) were eligible for our study. Median NIHSS at admission was 15 (IQR, 8–19) and median Alberta Stroke Program Early CT Score at baseline 9 (IQR, 8–10). In 74 (93%) patients a primary combined approach was used as first-line technique. First-pass near-complete reperfusion was achieved in 43 (54%) and first-pass complete reperfusion in 34 (43%) patients. Final near-complete reperfusion was achieved in 66 (83%) patients after a median of 1.5 (1–3) passes, while final successful reperfusion was observed in 96% of our cases. We observed no device malfunctions. Median NIHSS at discharge was 2 (IQR, 0–5) and 3 patients (4%) suffered a symptomatic intracranial hemorrhage.

Conclusions Based on our initial data, we conclude that the Trevo NXT is an effective and safe tool for mechanical thrombectomy especially when used for combined approaches.
Disclosure Nothing to disclose

EP53*

THE NOVEL TENZING INSERTS – THE SEAMLESS WAY TO REACH THE CLOT IN LARGE AND MIDDLE VESSEL CEREBRAL OCCLUSIONS – PRELIMINARY EXPERIENCE

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Introduction-Objectives To report the feasibility, safety and efficacy in utilizing the novel Tenzing inserts during stroke thrombectomy in order to reach the clot with large bore catheters, without need for crossing.

Aims-Methods The distal trackability of the new generation of super large bore aspiration catheters is provided by the newly engineered Tenzing inserts, which present virtually atraumatic self-centering soft tapered tip, capable to navigate the tortuous cervico-cranial vasculature with very unfrequently necessity of an inner microwire, the extremely large shaft which almost zeroes the step-off with the aspiration catheters, reducing the risk to get stuck at the level of vascular ledges/bifurcations and the unnecessary to cross the embolus, which significantly reduce the risk of downstream clot embolization. The Tenzing 7 is compatible with large bore aspiration catheters, while the Tenzing 8 matches the 088' HiPoint super large bore catheter, which in combination with the Base Camp guiding catheter is utilized for the Mount Everest Technique (MET).

Results We have utilized this novel insert in 20 patients with large and moderate vessel occlusions involving the anterior (19; 8 ICA, 8 MCA-M1, 3 MCA-M2) and posterior¹ circulation with 100% efficacy. No embolization in unaffected vascular territories or symptomatic SAH has been observed.

Conclusions In our preliminary experience, the utilization of the novel Tenzing inserts proved to be extremely effective in reaching the clot with large and super large bore catheters, without the necessity to cross the embolus as well as without encountering the issue of getting stuck at the level of vascular ledges/bifurcations.

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Disclosure Nothing to disclose

EP54*

UTILITY OF DRUG-ELUTING COROFLEX ISAR STENT IN INTRACRANIAL ATHEROSCLEROTIC DISEASE: A SINGLE CENTER EXPERIENCE IN 147 PATIENTS

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Introduction Intracranial atherosclerotic disease (ICAD) is a major cause of stroke worldwide. Different treatment regimen,

including medical treatment (e.g. dual antiplatelet inhibition) and endovascular treatment are available. We aim to investigate the safety and efficacy of the drug-eluting, balloon-mounted Coroflex ISAR stent in patients with ICAD.

Methods A retrospective analysis of patients with ICAD and attempted implantation of Coroflex ISAR stent in our institution from 2014 to 2020 was performed.

Results A total of 147 patients were included (74.1% males, average age 70 years 'range 47–93'). Median baseline modified Rankin score (mRS) was 0 (interquartile range 'IQR' 0–1) and median pretreatment mRS was 2 (IQR 1–4). Lesions treated were located in the ICA (42.9%), V4 segment (36.1%), basilar artery (12.2%) and M1 segment (8.8%). Stent was successfully implanted in 92.6% (137/147) and the vessel stenosis was reduced from a mean of 76% 'range 50–99' to 36% 'range 0–82'. Short-term follow-up was available in 77.7% of patients after a median of 3 months 'IQR 1–5' and long-term follow-up was available in 63.3% (93/147) after a median of 24 months 'IQR 14–40'. In-Stent stenosis occurred in 13.9% (16/115), recurrent stroke in 9.5% (11/115) and asymptomatic intracranial hemorrhage in 3.4% (5/147). Over-all mortality was 4.1% (6/147).

Conclusion The drug-eluting, balloon-mounted Coroflex ISAR is a safe and effective treatment option for ICAD. The overall recurrent stroke rate was 9.5% and mortality was 4.1%. Further work is needed to better identify ICAD patients for stenting.

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Disclosure Nothing to disclose

EP55

KEEP IT SIMPLE: THE SNACE (SOFIA NON-WIRE ASPIRATION CONTRAST ENHANCEMENT) TECHNIQUE FOR THE ENDOVASCULAR MANAGEMENT OF ACUTE ISCHEMIC STROKE

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Background The availability of advanced large-bore diameter aspiration catheters has improved recanalization rates and time. We report a prospectively collected clinical experience with a simple technique: SNACE (Sofia Non-wire Aspiration Contrast Enhancement) as the primary method for vessel recanalization.

Methods 38 prospective patients with ELVO at four institutions were included in the study. The SNACE technique was utilized in all patients. Procedural and clinical data were analyzed.

Results The SNACE approach using SOFIA 6 Plus Catheter was successful in achieving Thrombolysis in Cerebral Infarction (TICI) 2b or 3 revascularizations in 88% of cases. The first Pass effect was obtained in 75%. The average time from groin puncture to at least TICI 2b recanalization was 17 min. National Institutes of Health Stroke Scale (NIHSS) score average at the onset of 16 and improved to a median NIHSS