infarction identified within 3 days from the onset of bleeding not related to aneurysm repair. Circulatory failure and severe intracranial hypertension prior to ECI, or within 3 days from bleeding if no ECI, were retrospectively determined. The association between ECI, prior circulatory failure, severe intracranial hypertension and patient outcomes was tested using uni- and multivariate analyses.

Results Seven-hundred-and-fifty-three patients with aSAH were included. ECI were observed in 40 patients with a prevalence of 5.3% (95% CI; 3.7–6.9%). New ECI lesions developed in-hospital in 70% of cases. Circulatory failure or severe intracranial hypertension was more common in patients with ECI compared to those without ECI (90% vs. 11% respectively $P<0.001$). In ECI patients, in-hospital occurrence of circulatory failure or severe intracranial hypertension was observed in 60% of cases, and was significantly associated new in-hospital ECI lesions (71% vs. 33% in patients without new in-hospital ECI lesions, $P=0.036$). ECI was independently associated with WFNS grade (OR=2.3, CI95%=1.5–3.6, $P<0.001$), circulatory failure (OR=4.7, CI95%=1.8–11, $P=0.001$), severe intracranial hypertension (OR=11.1, CI95%=3.8–32.3, $P<0.001$), mortality at 1-month (OR=6.3, CI95%=2.9–13.5, $P<0.001$), and poor outcome in survivors (modified Rankin score >3 at 6-month) (OR=3.8, CI95%=1.22–11.9, $P=0.021$).

Conclusions ECI following aSAH is associated with prior brain haemodynamic impairment occurring mainly in-hospital, representing a potential therapeutic target in poor-grade aSAH.

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Disclosure Nothing to disclose

EP06* THE SUBARACHNOID HEMORRHAGE EARLY BRAIN EDEMA SCORE (SEBES) AS RADIOGRAPHIC MARKER OF CLINICALLY RELEVANT INTRACRANIAL HYPERTENSION AND UNFAVORABLE OUTCOME AFTER SUBARACHNOID HEMORRHAGE

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10.1136/neurintsurg-2021-ESMINT.6

Introduction The severity of early brain edema after aneurysm rupture was reported to be strongly associated with the risk of poor outcome after aneurysmal subarachnoid hemorrhage (SAH).

Objective/Aim Using the recently developed SEBES, we analyzed the predictors of early brain edema and its impact on the complications related to intracranial pressure (ICP) increase after SAH.

Methods All consecutive SAH cases treated between January 2003 and June 2016 with assessable SEBES were included

(n=745). Data on demographic characteristics, previous medical history, initial severity of SAH, need for conservative ICP treatment and decompressive craniectomy, occurrence of cerebral infarcts and unfavorable outcome at 6 months (mRS >2) were collected. Univariable and multivariable analyses were performed.

Results Younger age (<55 years, adjusted odds ratio [aOR] = 3.16, $p<0.0001$), female sex (aOR=1.64, $p=0.005$), poor initial clinical condition (WFNS=4–5, aOR= 1.74, $p=0.002$), presence of intracerebral hemorrhage (aOR=1.63, $p=0.011$), hypothyroidism (aOR=0.60, $p=0.043$) and renal comorbidity (aOR=0.29, $p=0.014$) were independently associated with the SEBES (scores 3–4). There was an independent association between the SEBES=3–4 and the need for conservative ICP treatment (aOR=2.43, $p<0.0001$), decompressive craniectomy (aOR=2.68, $p<0.0001$), development of cerebral infarcts (aOR=2.24, $p<0.0001$) and unfavorable outcome (aOR=1.48, $p=0.047$).

Conclusions The SEBES is a reliable predictor of ICP-related complications and poor outcome of SAH. Along with age- and sex-related predisposition to early brain edema, presence of certain comorbidities like hypothyroidism and renal diseases seem to play a protective role in the severity of early brain edema after SAH.

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Disclosure Nothing to disclose

EP07* LONG-TERM RESULTS OF COMPLEX WIDE-NECKED INTRACRANIAL ANEURYSMS TREATED WITH STENT-ASSISTED COILING USING LOW-PROFILE ACANDIS ACCLINO STENT SYSTEMS

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10.1136/neurintsurg-2021-ESMINT.7

Introduction Little data exists on endovascular treatment of complex intracranial aneurysms with the Acandis Acclino low-profile self-expanding closed-cell stent systems and is mainly limited to short- or midterm results.

Aims To report our long-term, single-center experience with the three generations of Acclino stents in the treatment of complex intracranial aneurysms.

Methods 64 aneurysms were treated electively using 91 Acclino stents. Single stent-assisted coiling was the preferred treatment in 40 cases and the kissing-Y stenting technique in 24 cases. We analyzed demographic data and long-term results.

Results All stents were successfully deployed with immediate complete or near complete occlusion achieved in 92.2%. Follow-up was available in 57 cases (89.1%) with a mean follow-up of 37 months (range 6–80 months). A complete or near complete long-term occlusion was achieved in 49 cases (86% RROC I/II). Eight residual aneurysms (14% RROC III) were

noted (4 cases of stable residual aneurysmal filling and 4 of aneurysmal recanalization). Two of those recurrent aneurysms were retreated by coil embolization. The overall directly procedural-related complication rate was 4.7%, including one death. Seven cases of in-stent-stenosis (12.3%; morbidity n=0) were detected on long-term follow-up with 6 of them when using the kissing-Y stenting technique.

Conclusions Endovascular treatment of various complex intracranial aneurysms using the Acandis Acclino stent systems is safe and efficient with high aneurysm occlusion rates combined with low complication rates at long-term follow-up. Overall, rates of in-stent-stenosis are low but seem to depend on the treatment technique (single stent-assisted versus kissing-Y stenting with coiling).

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Disclosure Nothing to disclose

EP08

THE POWER OF INFORMATION: WEB DEVICE IN-VIVO EVALUATION WITH ENDOVASCULAR HIGH FREQUENCY OPTICAL COHERENCE TOMOGRAPHY (HF-OCT) TECHNOLOGY: FIRST IN HUMANS EXPERIENCE

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10.1136/neurintsurg-2021-ESMINT.8

Introduction WEB (Woven Endobridge, Sequent Medical, Aliso Viejo, California, USA) device represents a new generation of the called “endosaccular flow disruption” devices which have been designed for the treatment of wide-neck bifurcation aneurysms (WNBA). early clinical experiences have reported a good safety and effectiveness profile. Current limitations during the endovascular treatment of those WNBA using conventional approaches such as high recanalization rates, significant thromboembolic complications and need for re-treatments may be overcome using this braided technology.

Materials and Methods High-frequency optical coherence tomography (HF-OCT) consists of an endovascular catheter-based imaging technique that has been validated in either peripheral and interventional cardiology fields. OCT technology combines the use of infrared light and tridimensional reconstruction, allowing the evaluation (micron-scale level) of the inner wall of the vessel, intravascular devices implanted as well as associated hemodynamic and biological responses.

Discussion We report here, the intracranial use of OCT to evaluate the effect of a carefully selected patient with a WNBA located in posterior circulation treated with WEB technology. We describe for the first time in humans these technical and angiographic aspects intra-procedural as well as the visualization close to the histology of the findings immediately after WEB deployment.

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Disclosure Boris Pabon proctorship con MEDTRONIC, Microvention Consultant MIVI

EP09*

GRINT: GUIDELINES FOR REPORTING IN INTERVENTIONAL NEUROLOGICAL THERAPY – FLOW DIVERTERS

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10.1136/neurintsurg-2021-ESMINT.9

Introduction Studies presenting clinical and imaging outcomes regarding flow diverter treatment for intracranial aneurysms lack uniformity. This especially applies to studies reporting off-label use. Reporting guidelines like STROBE have been developed to make methodological aspects of observational studies more uniform but they do not address topic-related issues. For example, they do not give recommendations for outcome measures. Lack of uniform outcome measures affects comparability of published studies.

Aim of the Study To set up guidelines for reporting methods and outcomes in studies investigating flow diversion treatment of intracranial aneurysms.

Methods First a literature review was performed on clinical and radiological outcome measures including timing of outcome. Next a consensus statement on preferred primary outcome measures and methods was developed by experienced clinicians.

Results Outcome measures are categorized in procedural, post procedural (≤30 days) and follow up. Both clinical and radiological outcome measures are proposed.

Conclusions Uniform reporting of methods and results of neuro interventional therapy will enhance comparability of studies. In this study we will provide recommendations for the reporting of methods and outcome measures regarding flow diverter treatment.

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Note: This is work in progress and final recommendations have not (yet) been made. The goal of the proposed abstract/presentation is to raise and enhance awareness of this topic and thereby initiate formation of a committee/workgroup to further work on these plans.

Disclosure Nothing to disclose

EP10*

ACCURACY EVALUATION OF DERIVO FLOW DIVERTER DEPLOYED LENGTH PREDICTIONS WITH PRESIZE NEUROVASCULAR AND COMPARISON OF DEVICE SIZE SELECTION BETWEEN TRADITIONAL PLANNING AND SIMULATIONS

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10.1136/neurintsurg-2021-ESMINT.10