Aims We aimed to test the superiority, between two centre-driven strategies, of an interventional strategy with distal balloon angioplasty versus conservative strategy without angioplasty, as first-line therapy for DCI.

Methods Two Centres with either conservative or intensive interventional strategies for treating DCI participated to this 1:1 matched retrospective cohort study. Consecutive patients admitted with aSAH between 2018 and 2019. Radiological DCI, death at 1 month, and favourable outcome at 6-months (modified-Rankin Scale score ≤ 2) were retrospectively analysed and compared between two-centres before and after propensity-score-matching for baseline characteristics.

Results The final analysis included 400 patients (200 in each group). Interventional and conservative groups differed in age (54 vs. 55 yrs, $P=0.040$), smoker (54% vs. 36%) and chronic high-blood pressure (37% vs. 48%), and intensive therapy for DCI including vasospasm angioplasty (38% vs. 0%, $P<0.001$), intravenous milrinone (35% vs. 0%, $P<0.001$), and induced hypertension (0%-vs-22%, $P<0.001$). After PS matching, 159 patients remained in each group. There was no significant difference of incidence of radiological DCI (9%-vs-14%, $P=0.15$), death (8% vs.9%, $P=0.4$), and favourable outcome 74%vs.72% ($P=0.4$) between interventional and conservative groups.

Conclusions This study failed to provide evidence that distal balloon angioplasty significantly improves the outcome following aSAH. Although the effect of unknown confounders between centres cannot be ruled out, our results question the use of such intensive therapies in clinical practice without further optimization and validation.

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Disclosure Nothing to disclose

EP04* EFFICACY AND SAFETY IN THE USE OF STENT-RETRIEVERS FOR TREATMENT OF CEREBRAL VASOSPASMS AFTER SUBARACHNOID HEMORRHAGE

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Introduction Cerebral vasospasms are an important cause of considerable morbidity and mortality after subarachnoid hemorrhage (SAH). In addition to conservative therapy, endovascular spasmolysis can play an important role in the management of this disease. Still, optimal management remains controversial. Stent-retrievers may provide an alternative and additional technique for the treatment of cerebral vasospasms.¹

Aim of Study To investigate the feasibility and safety of mechanical spasmolysis with different stent-retrievers.

Methods We retrospectively analyzed all patients with vasospasms after SAH that were treated with percutaneous spasmolysis using self-expanding and adjustable stent-retrievers and

remodeling devices in addition to conventional vasospasm therapy.

Results 21 vessel-segments with vasospasms in 12 patients were included. Spasmolysis with stent-retrievers was conducted in proximal and distal vessel segments without complications. In 42.9% a good effect, in 52.4% a medium effect and in only one case (4.8%) a poor angiographic effect was achieved, respectively. Spasmolysis was more effective in distal vessel segments compared to proximal (reduction of stenosis 56.6% vs. 26.7%, $p<0.05$) and more effective with 3 mm compared to 4 mm stent-retrievers (43.6% vs. 25.8%, $p=0.059$). 71.4% of patients had a favorable outcome (mRS 0–1) at long-term FU (77–226d).

Conclusion Stent-retrievers are frequently used in interventional stroke therapy and may represent a safe and effective treatment option for intracranial spasmolysis after SAH, especially for the more distal vessel-segments. Compared to conventional balloon-PTA, this method seems promising by its ease of use, low risk of rupture and retained blood flow during dilatation, however further improvement of the radial force is recommended.

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EP05* EARLY CEREBRAL INFARCTION FOLLOWING ANEURYSMAL SUBARACHNOID HEMORRHAGE IS ASSOCIATED WITH PRIOR CIRCULATORY FAILURE AND SEVERE INTRACRANIAL HYPERTENSION

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Introduction Early Cerebral injury (ECI) occurring in the first three days following a aneurysmal subarachnoid hemorrhage (aSAH) is associated with poor outcome and delayed cerebral ischemia.

Aims We aimed to correlate ECI with occurrence of circulatory-failure, and severe intracranial-hypertension.

Methods Two Institutional databases were searched retrospectively to identify consecutive patients admitted within 7 days following aSAH. ECI was defined as any radiological cerebral