inflation inside the previously placed stent is used to confirm contralateral communication (figure 1).

Results Coil embolization from the contralateral circulation with ipsilateral angiography results in occlusion of the recurrence (figure 2).

Conclusions The Circle of Willis may increase the risk of aneurysm recurrence on flow diverted segments. That being said, it provides a valuable path through which future access to treated aneurysms can be gained. Aneurysm coiling from the contralateral circulation is possible after flow diversion.

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E-115 IDENTIFYING COGNITIVE DYSFUNCTION AFTER ANEURYSMAL SUBARACHNOID HEMORRHAGE

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Background Aneurysmal subarachnoid hemorrhage (aSAH) is an often devastating condition, that can result in death or significant neurologic disability. Among the survivors with an otherwise good motor recovery after aSAH, more than half will have cognitive impairment. Implementation of a cognitive assessment strategy after aSAH has not been reported in the literature, despite guideline recommendations to perform cognitive assessment on all stroke patients. Cognitive assessment after aSAH will not only lead to increased recognition of cognitive dysfunction within this patient population, but may also support additional interventions and cognitive therapy to help patients regain function. The aim of this study is to improve cerebrovascular nurse and physician awareness of the significance of the clinical problem and use of objective cognitive assessments for the aSAH patient population.

Methods An educational intervention was developed to bring awareness to the significance of the clinical problem and an understanding of current evidence-based recommendations for cognitive dysfunction screening after aSAH. This was implemented in the Cerebrovascular Clinic associated with a large academic medical center with nurses and physicians caring for the aSAH patient population. Before providing the educational session, the clinicians completed a pretest questionnaire to assess baseline knowledge of cognitive dysfunction after aSAH. The clinicians then participated in a 20-minute peer-led education session and completed a posttest questionnaire. A paired samples t-test was used to determine whether there was a statistically significant mean difference between clinician knowledge of cognitive dysfunction in the aSAH population and recommendations for screening by performance on pretest at baseline compared to posttest after the education session.

Results A total of 9 cerebrovascular physicians and nurses completed the pretest, educational session, and posttest. Before the education session, 33% of participants reported familiarity with specific evidence-based recommendations for cognitive dysfunction screening after aSAH, compared with 100% after the education session. Clinician average score increased from 71.8% to 87.8% after the educational intervention, which is a statistically significant improvement ($p=0.005$). Seven of the participants had improved scores, and none of the participants had a lower score on posttest than pretest.

Conclusion A brief, peer-led education session on cognitive dysfunction after aSAH improves knowledge of the problem and current recommendations in the literature for cognitive dysfunction after aSAH. Ongoing research is necessary to understand whether the education session and observed positive knowledge change translate to a change in practice and compliance with evidence-based recommendations for cognitive dysfunction screening after aSAH.

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E-116 NOVEL PERCUTANEOUS ACCESS TO A CONVENTIONALLY INACCESSIBLE CAROTID-CAVERNOUS FISTULA

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Treatment strategies for carotid cavernous fistulas depend on access to the venous outflow of the fistula. The most commonly used route is through the inferior petrosal sinus. Other alternatives are percutaneous access to the superior ophthalmic vein, endovascular transvenous access through the facial vein or infraorbital direct puncture of the cavernous sinus. Trans-arterial embolization is a less commonly used, but viable alternative. Only one report has described endoscope assisted trans-sphenoidal puncture of the cavernous sinus for direct embolization.¹ We present the case of a 78-year-old female who presented with right eye ecchymosis for about 2 months. The initial diagnostic angiogram showed feeders from both external carotid arteries to bilateral cavernous sinus, right greater than left, and associated retrograde venous drainage from the right cavernous sinus into the sphenoparietal sinus and superficial sylvian veins. Initial approach to the fistula was attempted through bilateral inferior and superior petrosal sinuses which failed to demonstrate access to the right cavernous sinus. Further, there was no access to the cavernous sinus through the external venous system. Therefore, we decided to perform an endonasal trans-sphenoidal puncture of the right cavernous sinus in a neurosurgical hybrid operating room with the assistance of Stealth (Medtronic) and Xper guide (Phillips) intra-operative navigation guidance systems. With ENT surgical assistance using rigid endoscopy, stereotactic percutaneous access was obtained of the right cavernous sinus. The right cavernous sinus was then embolized through the trans-nasal route with additional localization and protection utilizing a Scepter XC balloon. Once complete embolization of the right cavernous sinus was achieved, the left cavernous sinus was coiled through the left inferior petrosal sinus. No complications were encountered throughout the entire treatment process and the patient's ecchymosis completely resolved.

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