vascular malformations (4.5%), moya moya disease, and carotid cavernous fistulas. In our case, no identifiable source of rupture was discovered on initial and delayed repeat cerebral angiography. Several authors have hypothesized that hemodynamic stress and defects in the wall of the cavernous ICA or the PTA may account for cases of non-aneurysmal SAH in patients with PTA.

Methods We present a case of a rare anatomical variant of a persistent trigeminal anastomosing directly with the superior cerebellar artery in a patient presenting with non-aneurysmal subarachnoid hemorrhage.

Results No identifiable malformation or aneurysm was discovered to explain the presence of subarachnoid hemorrhage. The patient underwent repeat cerebral angiography on post bleed day 7 which remained negative for aneurysm or source of rupture. The patient recovered fully and was discharged home.

Conclusion To our knowledge, this is the first description of a non-aneurysmal subarachnoid hemorrhage in a patient with an extremely rare Saltzman Type IIIa PTA variant. Recognizing PTA and its variants has important clinical implications especially in patients undergoing endovascular procedures or in patients with atherosclerotic carotid disease.

Disclosures K. Russell: None. **S. Pathuri:** None. **M. Webb:** None. **L. Birnbaum:** None.

E-194 ONE ROAD TO TWO PLACES: A UNIQUE CASE REPORT OF BILATERAL THALAMIC INFARCTIONS WITH NEUROANATOMICAL ANOMALY

S Nittala*, P Mercho, S Hussaini, P Youssef, C Oliu. *Neurology, Larkin Community Hospital Palm Springs Campus, Hialeah, FL, USA*

10.1136/jnis-2023-SNIS.293

Case Presentation A 61-year-old male with a PMHx of MI status post PCI, HTN, and HLD presented after being found unresponsive. On arrival to the ED, the patient had altered mental status with GCS of 8 and was intubated. The patient was not a thrombolytic candidate due to being outside the therapeutic window. On subsequent physical examination, he was found to have vertical gaze palsy on both upwards and downwards gaze. CT Head and CTA Head and Neck were negative for acute hemorrhage or LVO. However, MRI Brain WO showed bilateral thalamic infarcts with left thalamic hemorrhage making an occlusion of an Artery of Percheron neuroanatomical variant the most likely etiology. An extensive hypercoagulable workup showed the possibility of mild antithrombin 3 deficiency. Dual-antiplatelet therapy was initiated and the patient made substantial recovery.

Discussion Stroke is a frequent acute neurological presentation to an emergency department; however, strokes presenting as encephalopathy without clear lateralizing features require a high index of suspicion for appropriate recognition and management. The present case included altered mental status, memory impairment, and vertical gaze palsy, representing a triad consistent with artery of Percheron infarct, however given intact horizontal gaze, symptoms would have been non-lateralizing on NIHSS testing. Subsequent CT Head and MRI Brain demonstrated isolated bilateral thalamic infarcts with evidence of left thalamic hemorrhagic. These findings are a classic presentation for occlusion of the artery of Percheron, a neuroanatomical vascular variant of one artery arising from the Posterior Cerebral Artery supplying bilateral paramedian thalami. The Artery of Percheron is a rare entity, estimated to occur in 4% of the population with occlusion resulting in CVA even more rare (Lazzaro et al. 2010). It is important to consider bilateral ischemic pathology, even as might arise from a single artery, as a differential in cases of acute encephalopathy.

Conclusion The scientific relevance of the present case is to address various etiologies of bilateral thalamic stroke with special attention to single artery causes of bilateral strokes versus other causes of bilateral thalamic strokes. It is important to consider bilateral ischemic pathology, even as might arise from a single artery, as a differential in cases of acute encephalopathy. Reviewing the various etiologies of cerebral infarction can improve patient outcomes and provide a comprehensive understanding of the patients' presenting symptomatology.

A practice gap exists in the identification and treatment of bilateral thalamic stroke etiologies. Given that these rare strokes typically present in the classic triad of AMS, memory impairment and vertical gaze palsy, it can be reasonable to miss the diagnosis in a high acuity setting such as a stroke alert that places high emphasis on criteria such as the NIHSS. As the NIHSS considers lateral gaze palsies, vertical extraocular movements may not be evaluated in the ED.

Disclosures S. Nittala: None. **P. Mercho:** None. **S. Hussaini:** None. **P. Youssef:** None. **C. Oliu:** None.

E-195 ANGIOGRAPHIC ANATOMY OF SACRAL DURAL ARTERIOVENOUS FISTULAS

[1]E Fuller*, [1]M Hayakawa, [2]K Dlouhy, [3]S Ortega, [3]E Samaniego, [4]C Derdeyn. *[1]Radiology, University of Iowa, Iowa City, IA, USA; [2]Neurosurgery, University of Iowa, Iowa City, IA, USA; [3]Neurology, University of Iowa, Iowa City, IA, USA; [4]Radiology, University of Iowa, Iowa City, IA, USA*

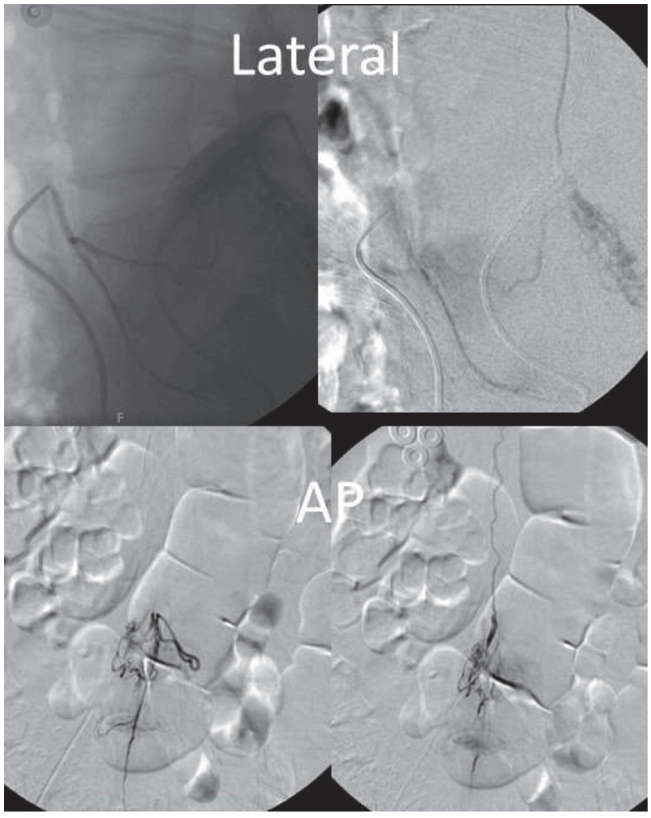
10.1136/jnis-2023-SNIS.294

Background and Purpose The identification of sacral dural arteriovenous fistulas (DAVFs) can be challenging. We sought to review our experience, and the published literature, for the arterial supply and venous drainage of sacral DAVFs.

Methods We retrospectively reviewed our electronic medical record for patients with sacral DAVFs diagnosed at our institution. Catheter angiograms were reviewed for arterial supply and venous drainage. We reviewed the published literature for this information as well.

Results We identified three patients with sacral DAVFs diagnosed on catheter angiography between January 2016 and November 2022. One arose at S1 and the other two at S2. One (figure 1 - at S1) was supplied by the median sacral artery (MSA). The remaining two were supplied by branches of the lateral sacral artery (LSA). All three drained into the Filum Terminale Vein (FTV) before anastamosis with the coronal venous plexus of the cord. Published reports limit the supply of sacral DAVFs to the MSA, the LSA or the Iliolumbalis artery (ILA). All drained via the FTV.

Conclusions 1. A dilated FTV on cross-sectional imaging in a patient with a suspected spinal DAVF should raise suspicion for a sacral origin. 2. Selective injections of the MSA, LSA and ILA should be performed in the hunt for a spinal DAVF.



Abstract E-195 Figure 1

Disclosures E. Fuller: None. **M. Hayakawa:** None. **K. Dlouhy:** None. **S. Ortega:** None. **E. Samaniego:** None. **C. Derdeyn:** 2; C; Penumbra, Microvention, Silk Road, NoNO. 4; C; Pulse Therapeutics.

E-196 ENDOVASCULAR VERSUS OPEN MICROSURGICAL TREATMENT FOR RUPTURED BLISTER ANEURYSMS OF THE INTERNAL CAROTID ARTERY: A SYSTEMATIC REVIEW AND META-ANALYSIS

[1]N Brown*, [2]R Singh, [3]S Koester, [4]J Gendreau. *[1]UC Irvine, Newport Beach, CA, USA; [2]Mayo Clinic, Scottsdale, AZ, USA; [3]Vanderbilt University, Nashville, TN, USA; [4]Johns Hopkins, Baltimore, MD, USA*

10.1136/jnis-2023-SNIS.295

Background Blister aneurysms (BAs) of the internal carotid artery (ICA) are associated with high mortality rates and are challenging to treat because of their fragile wall, typically poorly defined neck, and broad communication with the parent artery.
Objective To evaluate the efficacy and outcomes of endovascular compared to open microsurgical treatment for BAs of the ICA.
Methods A literature search of PubMed and Web of Science was performed to identify primary studies from 2000 to 2022 that discussed the clinical outcomes of endovascular or open surgical treatment of BAs of the ICA. Case reports, technical reports, animal studies and non-English studies were excluded. Studies describing modified Rankin Score (mRS) following treatment of BAs of the ICA were extracted for systematic review and meta-analysis.
Results Twenty-six studies describing 519 cases with ruptured BAs of the ICA treated with endovascular or surgical approaches were included. Of the 519 cases, 350 cases were endovascularly managed, while 169 cases were microsurgically managed. Endovascular treatments resulted in better functional outcomes with lower mRS (OR: 4.80; 95% CI = 1.18-19.48; P = 0.03). Pre-operative Fisher grade lower than 3 was associated with better functional outcomes (OR: 6.12; 95% CI = 1.32-28.37; P = 0.02), but age younger than 47 years-old (integer value corresponding to mean age of all patients included in our analysis) was not associated with better functional outcomes (OR: 1.62; 95% CI = 0.44-5.93; P = 0.47).
Conclusion Our results suggested that when endovascular treatment was an option, it was associated with improved outcomes over open microsurgical management. While we examined open versus endovascular interventions for blister aneurysms from a macro scale perspective, future studies should focus on comparing more granular data pertaining to the specific, nuanced variations in techniques within the open and endovascular approach categories. Furthermore, the ways in which specific angioarchitectural makeup, aneurysm location and size, and associated comorbidity factors may make a particular blister aneurysm more suited for one approach over another should be further delineated.
Disclosures N. Brown: None. **R. Singh:** None. **S. Koester:** None. **J. Gendreau:** None.

E-197 USE OF BALLOON-MOUNTED STENTS AND DRUG ELUTING STENTS IN INTRACRANIAL ATHEROSCLEROTIC DISEASE: SINGLE CENTER EXPERIENCE

[1]N Turan, [2]A Malek*. *[1]Department of Neurology, Tufts Medical Cetner, Boston, MA, USA; [2]Department of Neurosurgery, Tufts Medical Cetner, Boston, MA, USA*

10.1136/jnis-2023-SNIS.296

Background Balloon mounted (BMS) and drug-eluting stents (DES) have been used for ICAD with variable success. In this study, we report on our institutional experience with BMS/DES for treatment of ICAD.
Methods 27 patients with ICAD that underwent treatment with BMS, DES and Wingspan stents at Tufts Medical Center between November 2005–May 2022 were included in this retrospective study. Baseline patient and lesion characteristics were collected. Primary outcomes were periprocedural complications and occurrence of TIA/ischemic or hemorrhagic stroke, death within 72 hours. Secondary outcomes were occurrence of TIA/ischemic stroke and hemorrhagic stroke, death and MRS at long term follow up. Percent stenosis was evaluated immediately post-procedure and on follow-up imaging.
Results Mean±SD age was 62.8±9.0 years.25.9% were female. Stroke risk factors included hypertension (88.9%), hyperlipidemia (70.4%), diabetes mellitus (59.3%). Of the 27 treated patients, 26 received 27 stents. Procedure was aborted for 1 patient due to tortuous anatomy. Treated artery was in anterior circulation in 57% and posterior circulation in 43%. Four patients who received stents were treated emergently for acute stroke with thrombectomy and/or IV/IA tPA within 24 hours of presentation and 22 patients received stents in non-emergent fashion. SAH/IVH was seen in DES group in the setting of IV/IA tPA in the emergently treated group. In non-emergent settings, no patients developed TIA/ischemic stroke or hemorrhagic stroke within 72 hours of BMS and Wingspan