and elevated CSF opening pressure. Venography revealed bilateral transverse sinus stenoses (right side greater than the left) and a significant pressure gradient on the right side. Dilation of the right transverse sinus with a single stent resulted in a decreased pressure gradient across the arachnoid granulation. Clinical follow-up at 2 years after treatment revealed complete resolution of her symptoms. Retrospective review of her pre-procedure MRI revealed bilateral encephalocoeles into prominent arachnoid granulations. Patient B is a 45-year-old male with progressive vision loss, papilledema, and headaches refractory to medical management whom underwent stenting in a right dominant transverse sinus. Venography at the time of stenting revealed bilateral transverse sinus stenoses (left side greater than the right) with significant pressure gradients on both sides. Clinical follow-up at 4 months after treatment revealed a full recovery. Retrospective review of his pre-procedure MRI demonstrated narrowing of the left transverse sinus due to an encephalocoele into an arachnoid granulation.

Conclusion Venous sinus stenting is a unique and unreported treatment approach for patients with IHH and concomitant encephalocoeles. We present two cases successfully treated with venous stenting.

Disclosures G. Drocton: None. A. Copelan: None. M. Amans: None. R. Khangura: None.

Conclusion

Granulation.

Eisenmenger: None. None. R. Khangura: None.


Abstract E-047

VESSEL WALL IMAGING AND BRAIN ARTERIOVENOUS MALFORMATIONS: INITIAL DESCRIPTION OF ENHANCEMENT PATTERNS

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Purpose Usefulness of Intracranial Vessel Wall Imaging (VWI) on 3 Tesla Magnetic Resonance Imaging (3T MRI) performed on Postcontrast 3D Turbo Spin-Echo MR Imaging Sequence (CUBE, GE Healthcare, Chicago, United-States) has been demonstrated in the management of intra-cranial aneurysm. Our purpose was to describe patterns and prevalence of wall enhancement in brain arterio-venous malformations (bAVM).

Methods Pediatric and adult patients diagnosed with bAVM and referred respectively to a pediatric quaternary care center and a tertiary care center between 2016 and 2018 and to a tertiary care center between 2016 and 2018 were enrolled. At least one CUBE sequence (initially or during follow-up) were pooled and retrospectively analyzed. Baseline clinical, demographic and imaging data were retrospectively analyzed. Imaging were reviewed for key bAVMs angioarchitectural characteristics, i.e. nidus size, location, Spetzler Grade, venous drainage, arterial or nidal aneurysm and the presence of vessel wall enhancement (nidal, venous or arterial). Chi-squared test was used with a threshold of p<0.05 to be considered significant.

Results 52 patients, 19 children and 33 adults (mean age: 31 y.o.; median: 43 y.o) with 52 bAVM were included. 47% patients were untreated when the first CUBE was performed.

Abstract E-048

REAL WORLD AVAILABILITY AND UTILIZATION OF CT PERFUSION IN ACUTE ISCHEMIC STROKE

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Purpose Usefulness of Intracranial Vessel Wall Imaging (VWI) on 3 Tesla Magnetic Resonance Imaging (3T MRI) performed on Postcontrast 3D Turbo Spin-Echo MR Imaging Sequence (CUBE, GE Healthcare, Chicago, United-States) has been demonstrated in the management of intra-cranial aneurysm. Our purpose was to describe patterns and prevalence of wall enhancement in brain arterio-venous malformations (bAVM).

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Results 52 patients, 19 children and 33 adults (mean age: 31 y.o.; median: 43 y.o) with 52 bAVM were included. 47% patients were untreated when the first CUBE was performed.

Introduction With the success of endovascular stroke therapy (EST), eligible acute ischemic stroke (AIS) patients must be appropriately screened. CT Perfusion (CTP) was the predominant imaging technique used to identify candidates in the recent trials of EST. However, the real-world utilization and availability of CTP is unknown.

Methods Patients with AIS were identified by validated diagnosis codes from data on all discharges from hospitals and Emergency Departments (EDs) in Florida (FL, 2012 – 2016) and New York (NY, 2012–2014). The primary endpoint was ED imaging utilization, defined by the corresponding billing codes. CTP or EST-capable hospitals were defined as those performing at least one CTP or EST in the corresponding calendar year. Trends over time and by region were compared.

Results In the FL cohort, among 226,051 admissions for stroke at 285 hospitals, median age was 72 [IQR 61–82] and
E-049  **DWI INFARCTION PATTERNS AND PERFUSION PARAMETERS IN ANTERIOR VERSUS POSTERIOR CIRCULATION STROKE SECONDARY TO INTRACRANIAL ATHEROSCLEROTIC DISEASE**

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**Purpose** Intracranial atherosclerotic disease is a common etiology of ischemic strokes and stroke recurrence. Recent literature suggests treatment should be tailored according to plaque instability versus perfusion failure mechanisms, rather than the degree of stenosis. We aimed to study the difference in infarction patterns between anterior and posterior circulation intracranial atherosclerotic disease (ICAD), and their relationship to vascular risk factors and perfusion parameters.

**Methods** A retrospective review of our institution’s prospective stroke database from Jan 2012 to May 2018 was performed. We identified patients with acute ischemic stroke (AIS) secondary to ICAD, restricted diffusion weighted imaging (DWI) findings attributed to a > 50% intracranial stenosis with or without perfusion abnormality, mean transit time (MTT) elevation, on MRI/MRA/MRP performed within one week of presentation. Infarction patterns were qualitatively graded as thromboembolic (TE), perforator (P), or watershed (W) in the vascular distributions of interest with agreement between two interventional neuroradiologists. Baseline demographics, vascular risk factors and correlation of DWI infarction patterns and perfusion MTT patterns were studied with respect to the anterior versus posterior intracranial circulation.

**Results** We identified 55 patients with anterior circulation and 18 patients with posterior circulation infarcts secondary to ICAD. There was no difference in baseline demographics between both groups. Watershed infarctions were seen in 30% of symptomatic patients with anterior circulation ICAD. There were no significant differences observed in the non-watershed infarction patterns between anterior and posterior circulation disease (TE: 41% vs 44%, P: 38% vs 39% and mixed: 21% vs. 17%, p=0.908), respectively. Mean transit time was equally elevated in both watershed (90%) vs. non-watershed (86%) anterior circulation ICAD, p=0.99. ICAD patients with posterior circulation infarcts were more likely to have suffered prior strokes/TIAs (73% vs 35%, p=0.016) with higher trends in diabetics (73% vs. 43%, p=0.068).

**Conclusion** Hemodynamically significant stenosis is observed in the majority of symptomatic anterior circulation ICAD but is not necessarily associated with watershed DWI infarction patterns. Posterior circulation ICAD exhibits higher likelihood for stroke recurrence with a perforator or thromboembolic pattern of infarction. Combining MR vessel wall imaging techniques with DWI patterns of infarction and 4D flow MRA imaging to assess flow compromise in the posterior circulation may be beneficial in further discerning the mechanisms of ICAD related stroke, risks of stroke recurrence, and guide medical versus interventional therapies.

**Disclosures** A. Abdalla: None. O. Ansari: None. M. Pan: None. D. Cantrell: None. A. Shaibani: None. M. Potts: None. M. Hurley: None. B. Jahromi: None. S. Ansari: None.

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E-050  **SAFETY AND FEASIBILITY OF DISTAL RADIAL ACCESS IN ANATOMIC SNUFF BOX FOR CEREBRAL ANGIOGRAPHY: INITIAL EXPERIENCE**

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**Objective** To describe feasibility, technique and safety of distal radial access in anatomic snuff box for cerebral angiography. Also, to describe potential advantages and limitations compared to conventional radial access at the wrist and transfemoral access.

**Methods** We performed retrospective review of cerebral angiography procedures performed or attempted with distal radial access between October 2018 through February 2019, at University Hospital (Newark, NJ). Ultrasound measurement of radial artery in anatomic snuff box was performed in all potential candidates and different approach was performed in patients with <2 mm radial artery diameter. We did not perform Barbeau test, given as cardiology literature suggesting