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. Dilatation 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 encephalocele 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.


Abstract E-047 Figure 1

21 bAVMs were ruptured, more frequently in children (12/19 versus 9/33; p = 0.01). Parietal wall enhancement was observed in 16/21 ruptured bAVM and 27/31 unruptured bAVM. In ruptured bAVM, the site of the rupture, either venous ectasia or nidal aneurysm, demonstrated a wall enhancement in 30% of cases. In unruptured bAVM, enhancement rate did not differ between children and adults (6/7 versus 21/24).

Conclusion The prevalence of wall enhancement in bAVM vascular constituent is high, in both ruptured and unruptured lesions and was similar in adult and pediatric population. Further studies are warranted to determine the potential role of VWI in bAVM.


Abstract E-048

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 between 2016 and 2018 and to a tertiary care center between 2013 and 2018 who underwent 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.
113,489 (50%) were female. 14,920 (7%) received IV tPA and 3,026 (1.3%) received EST. Nearly all strokes were treated at CTA and MRI-capable EDs, but 139,316 (62%) were treated at non-CTP-capable hospitals (figure 1). 28 (60%) of EST-capable hospitals were not CTP-capable, a trend that did not change over the study period (figure 2). In the NY cohort, among 91,193 admissions for stroke at 225 hospitals, 71,333 (78%) were evaluated at non-CTP-capable centers. 30 (13%) of hospitals treating AIS patients were CTP-capable. CTP-capable centers were concentrated in urban areas, with significant annual stroke rates in non-urban areas without CTP.

Conclusions In this large cohort study, the majority of AIS patients and EDs treating AIS did not have access to CTP, a finding that did not immediately increase following 2015 trials. Use of CTP as a universal screening tool for EST may still be limited. Non-contrast CT remains the most important screening tool for EST in AIS patients under 6 hours from symptom onset.

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**E-049**

**DWI INFARCTION PATTERNS AND PERFUSION PARAMETERS IN ANTERIOR VERSUS POSTERIOR CIRCULATION STROKE SECONDARY TO INTRACRANIAL ATHEROSCLEROTIC DISEASE**

1R Abdalla*, 1O Ansari, 1M Pan, 2D Cantrell, 3A Shaibani, 3M Potts, 3M Hurley, 2B Jahromi, 3S Ansari. 1Radiology, Northwestern University – Feinberg school of Medicine, Chicago, IL; 2Radiology, Neurological Surgery, Northwestern University – Feinberg school of Medicine, Chicago, IL; 3Radiology, Neurology, Neurological Surgery, Northwestern University – Feinberg school of Medicine, Chicago, IL.

**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.


**E-050**

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

P. Patel*, I Bach, N Majmundar, P Khandelwal. Neurosurgery, Rutgers University, Newark, NJ

**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...