

11.1%) included sudden asystole (n=1), acute in-stent thrombosis (n=3), minor stroke (n=3), and stent shortening (n=1). All complications were resolved without permanent neurological deficit. Angiographic follow-up (mean, 13.0 months) was achieved in 49 patients and revealed in-stent restenosis in 1 patient (2.0%) and stent malposition by shortening in 2 patients (4.1%). No stent fracture occurred in any of the patients on follow-up angiography. All patients were neurologically stable at clinical follow-up.

**Conclusions** Endovascular treatment of symptomatic VAOS using the closed-cell, self-expandable Carotid Wallstent is technically feasible and effective in alleviating patient symptoms and for improving vertebrobasilar blood flow.

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E-071

#### INSTITUTIONAL TREATMENT PRACTICES FOR CENTRAL RETINAL ARTERY OCCLUSION: A RETROSPECTIVE SINGLE-CENTER ANALYSIS PROVIDING INSIGHT TOWARDS MULTI-DISCIPLINARY TREATMENT OF 'EYE STROKE'

K Lee\*, S Coffman, C Tschoe, K Fargen, S Wolfe. *Neurosurgery, Wake Forest School of Medicine, Winston-Salem, NC*

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**Introduction** Central retinal artery occlusion (CRAO) is an ophthalmologic emergency that can result in permanent, devastating vision loss. Timing and use of interventions such as ocular digital massage, anterior chamber paracentesis, acetazolamide, topical beta-blockers, and thrombolysis have unclear efficacy and guidelines in the literature, and over 25% of CRAO are associated with cerebral ischemia. In the advent of intra-arterial treatment algorithms for stroke, there may be new opportunities to treat CRAO in an emergent, multidisciplinary approach similar to that of ischemic stroke to improve outcomes. This study examines the institutional practices at Wake Forest Baptist Medical Center (WFBMC) in an effort to establish a formalized approach to treatment of CRAO.

**Methods** This is a retrospective review including patients who were diagnosed or treated for acute non-arteritic (NA) CRAO from January 2017 to January 2019 at WFBMC. Time to presentation, services consulted for evaluation of patients with CRAO, standard stroke work-up carried out during the admission, treatments implemented specifically for the diagnosis of CRAO, and complications from treatment were recorded. Descriptive statistics were utilized.

**Results** Of 144 patients who were seen at WFBMC for CRAO during this timeframe, we identified 64 patients who received initial diagnostics and management for acute NA-CRAO. The cohort was 65.6% male, and the average age was 66.4 years. The most frequent comorbidity was hypertension (67.2%), with current or former smoking as the second most frequent comorbidity (62.5%). 18.8% of patients presented within 4 hours of symptoms, 39% presented between 4 and 24 hours, and 42.2% of patients presented greater than 24 hours after symptom onset. Ophthalmology, neurology stroke, and neurosurgery were consulted in 76.6%, 75%, and 10.9% of cases, respectively. Overall workup included CT (32.8%), MRI (70.3%), CTA or MRA (48.4%), visual acuity (82.8%), fundoscopic exam (84.8%), ocular pressures (78.1%), carotid doppler (67.2%), transthoracic

echocardiogram (79.7%), CBC (84.4%), lipid panel (70.3%), A1C (68.6%), ESR (64.1%), and CRP (62.5%). 10.9% of patients had finding of acute stroke on MRI, and an additional 3.1% were diagnosed with transient ischemic attack. Ipsilateral internal carotid artery stenosis  $\geq$  50% was found in 21.9% of patients. 59.4% of patients did not receive any treatment for CRAO (ocular digital massage, anterior chamber paracentesis, acetazolamide, etc.), and 43.8% of patients did not receive any escalation in home antiplatelet or anticoagulation regimen. Patients had a more complete workup and treatment when they presented within 24 hours of symptom onset.

**Conclusions** The management of acute CRAO is inconsistent and usually errs on the side of conservative management at our institution. Given the similarities to stroke and the significant number of patients with concomitant stroke risk factors and symptoms, multidisciplinary stroke algorithms should be considered for this disease. At our institution, we will begin a randomized, controlled trial for CRAO 'eye stroke' to mirror recent protocols in stroke care that allow for rapid mobilization and multidisciplinary treatment of patients. This will help streamline patient care and ensure that each patient receives all available and indicated therapies for maximum preservation and return of visual acuity.

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E-072

#### EMBOLIZATION OF TRAUMATIC CAROTID-CAVERNOUS FISTULA VIA DIRECT PERCUTANEOUS PUNCTURE OF THE SUPERIOR OPHTHALMIC VEIN: A CASE REPORT

D Kim\*, S Ha. *Neurosurgery, Chosun Univ. Hospital, Gwangju Metropolitan City, Korea, Republic of*

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Endovascular treatment of Carotid-cavernous fistulas (CCFs) can be challenging if typical transvenous routes are inaccessible. We describe a case of a traumatic direct carotid-cavernous fistula in which transvenous embolization via the inferior petrosal sinus (IPS) was failed. An embolization of CCF via direct percutaneous puncture of the superior ophthalmic vein (SOV) was done successfully.

**Disclosures** D. Kim: None. S. Ha: None.

E-074

#### CORRELATION OF BASELINE NLR AND CTP IMAGING IN SELECTED PATIENTS WITH LARGE VESSEL OCCLUSION ISCHEMIC STROKE

M Aly\*, R Abdalla, M Hurley, A Shaibani, S Ansari. *Intervention Radiology, Northwestern University, Chicago, IL*

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**Purpose** Many pieces of evidence in the literature suggest that Neutrophils-Lymphocytes ratio (NLR) can be used as an inexpensive biomarker to assess the degree of inflammation for multiple diseases including cancer, coronary artery disease, metabolic syndrome, and sepsis. Cerebral infarction leads to an inflammatory response, ischemic tissue release proinflammatory chemokines which activates leukocytes and enhance their trans-endothelial migration to the site of inflammation.

E-076

### OUTCOMES OF LARGE VESSEL OCCLUSION THROMBECTOMY IN PATIENTS WITH CT PERFUSION DEFINED LARGE CORE STROKE

<sup>1</sup>A Aghaebrahim\*, <sup>2</sup>S Desai, <sup>1</sup>A Monteiro, <sup>1</sup>M Granja, <sup>1</sup>G Agnoletto, <sup>1</sup>G Cortez, <sup>1</sup>D Gonsales, <sup>3</sup>C Legault, <sup>4</sup>C Powers, <sup>2</sup>A Jadhav, <sup>1</sup>E Sauvageau, <sup>3</sup>G Albers, <sup>2</sup>T Jovin, <sup>1</sup>R Hanel. <sup>1</sup>Neurosurgery, Baptist Health System- Jacksonville, Jacksonville, FL; <sup>2</sup>Department of Neurology, University of Pittsburgh Medical Center, Pittsburgh, PA; <sup>3</sup>Department of Neurology, Stanford University, Palo Alto, CA; <sup>4</sup>Neurosurgery, The Ohio State University, Columbus, OH

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**Introduction** The benefit of endovascular thrombectomy (ET) is well established in patients with small anterior circulation infarctions and large penumbra. However, this benefit is not proven in patients with a baseline large core infarction. This subpopulation was excluded from major thrombectomy clinical trials. The purpose of this study was to report the outcome of patients with large baseline core based on CTP who underwent stroke thrombectomy at 4 large stroke centers.

**Methods** Prospectively collected large vessel occlusion databases were queried to identify patients with large baseline infarct cores (CBF greater than 30%  $\geq$  50 mL; based on Computed Tomography Perfusion [CTP] processed by RAPID Software [iSchemaView]). All patients treated with thrombectomy were included in the study. Modified Rankin Scale (mRS) was used for evaluation of clinical outcomes at baseline and 90 days. Demographic information, baseline clinical data, radiological features (infarct core size, penumbra and collaterals) and follow-up were collected.

**Results** A total of 75 patients were included in the study. Mean age was 65  $\pm$  14.9 years and 45.3% were male. Median infarct core was 75.5 mL (IQR 39) and median ASPECTS was 7 (range 3–10). Close to half (50.7%) of patients received IV tPa. Only 8.3% of patients had good collaterals. Mean time to groin puncture was 373 $\pm$ 384 minutes and 88% of patients achieved TICI 2b or higher. Rates of good outcome (mRS 0–2) and acceptable outcome (mRS 0–3) were 28.4% and 35.5% respectively. Rate of Parenchymal Hematoma type 2 was 10.6%. The rate of good outcome was significantly higher in patients treated  $<$ 6h (44.2% vs. 17.4%,  $P=0.023$ ).

**Conclusions** Acute stroke thrombectomy may be beneficial in some patients with large core based on CTP especially those who present early ( $<$ 6 hours from last seen well) and it should not be withheld solely based on the estimated core infarct volume on CTP.

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E-077

### PROTEIN EXPRESSION OF INTRA-ARTERIAL BLOOD DISTAL AND PROXIMAL TO THROMBUS DURING MECHANICAL THROMBECTOMY

<sup>1</sup>B Maglinger\*, <sup>1</sup>J Frank, <sup>2</sup>C McLouth, <sup>1</sup>A Trout, <sup>1</sup>J Roberts, <sup>3</sup>S Grupke, <sup>1</sup>J Turchan-Cholewo, <sup>1</sup>A Stowe, <sup>3</sup>J Fraser, <sup>1</sup>K Pennypacker. <sup>1</sup>Department of Neurology, University of Kentucky, Lexington, KY; <sup>2</sup>Department of Behavioral Science, University of Kentucky, Lexington, KY; <sup>3</sup>Department of Neurosurgery, University of Kentucky, Lexington, KY

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Metanalysis has suggested that baseline NLR is a promising predictor of ischemic stroke clinical outcomes. This study aims to evaluate the relationship between baseline NLR in patients with large vessel occlusion (LVO) and their imaging selection for endovascular treatment (ET).

**Materials and Methods** We reviewed our prospective stroke intervention database from Nov 2015 to June 2019 for patients that underwent ET for LVO with an admission NLR. Patients were excluded from the study if they received corticosteroids or had any history of infectious/systemic disease prior to the development of stroke symptoms. We studied patient demographics, vascular risk factors, NIHSS on admission, data from imaging (NCCT ASPECT, CTP rCBF  $<$ 30%, Tmax  $>$ 6s and mismatch ratio), and 90 days outcome measured by mRS. Statistical analysis was performed with SPSS version 17, univariate analysis was conducted between age, NLR, NIHSS, data from imaging and mRS using a correlation coefficient.

**Results** Seventy-eight met our inclusion criteria (mean age, 67  $\pm$  19; 39% women, mean NIHSS, 17  $\pm$  6), 95% (n=74) were due to anterior circulation LVO while only 5% (n=4) were due to posterior circulation LVO occlusion. There was a significant positive correlation between NLR and rCBF $<$ 30% representing the volume of infarction core ( $p=0.046$ ), also there was a significant negative correlation between ASPECT score and rCBF $<$ 30% ( $p=0.035$ ). No correlation was observed between NIHSS and ASPECT ( $p=0.94$ ) or NIHSS and rCBF $<$  30% ( $p=0.83$ ), however, there was a trend toward significance correlating NIHSS and Tmax $>$ 6s representing the volume of ischemic tissue ( $p=0.09$ ). Predictably, NLR was not correlating with 90-days mRS ( $p=0.703$ ) as all patients in our cohort underwent ET, nevertheless, there was a significant correlation between age and 90-days mRS ( $p=0.001$ ).

**Conclusions** NLR is an inexpensive and readily available biomarker that correlates with CTP predicted core infarction volume in LVO ischemic stroke. However, in CTP selected patients with relatively small core infarct volumes, NLR may not predict 90-day mRS as endovascular treatment salvages ischemic tissue, minimizes final infarct volume, and suggests follow-up NLR may be more valuable predictor of clinical outcome.

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