Abstracts

Conclusions SSFD successfully treated three patients with cervical carotid pseudoaneurysms at our institution from 2019 to present with no complications, satisfactory angiographic appearance, and symptom resolution. Though further research is required to confirm these results, we demonstrate that SSFD appears both safe and effective for endovascular treatment of cervical carotid pseudoaneurysms.

Disclosures R. Achey: None. L. Sheikh: None. T. Patterson: None. G. Toth: None. N. Zobenica Moore: None. M. Bain: None.

E-120

THE UTILITY OF REPEAT COMPUTED TOMOGRAPHY ANGIOGRAM AFTER BLUNT CEREBROVASCULAR INJURY

Z Aljuboori*, K Meyer, R James, D Ding. *Neurosurgery, University of Louisville, Louisville, KY*

10.1136/neurintsurg-2020-SNIS.152

Introduction Blunt cerebrovascular injury (BCVI) can lead to thromboembolic events. The necessity of short-term repeat vascular imaging after the initial diagnosis is controversial. The aim of this retrospective cohort study is to assess the utility of short-interval computed tomography angiography (CTA) after an initial diagnosis of BCVI.

Methods We retrospectively reviewed consecutive patients with BCVI managed at the University of Louisville from 2016–2019 who underwent short-term (1–3 weeks) repeat CTA after initial diagnosis. The exclusion criteria were age <18 years, penetrating injury, and previous neck irradiation. We collected baseline data and performed logistic regression analysis to identify predictors of BCVI imaging outcomes.

Results The study cohort comprised 38 patients (68% male) with a mean age of 45 years. Motor vehicle accident (79%) was the most common mechanism of injury, and 89% had cervical spine fractures. Unilateral VA and grade I dissection were the most common findings on initial CTA were a unilateral VA dissection (66%) that was Biffl grade I (36%). Antiplatelet therapy or anticoagulation was administered to 82% of patients after the initial diagnosis (table 1). Shift analysis showed a significant improvement in Biffl grades on repeat CTA ($p=0.0001$) (figure 1). Biffl grades I injuries were more likely to improve (relative risk ratio [RRR]=3.6, CI 95% (1.02–13.1), $p=0.04$), whereas grade IV injuries were more

Abstract E-120 Table 1 Patients demographics

Variable	Percentage
Gender	Males 68%
Mechanism of injury	Fall 21%
MVA	79%
Cervical spine fractures	89%
First rib fractures	16%
Early Stroke	5%
Delayed Stroke	0%
Vascular intervention	8%
Received ASA or AC between 1st and 2nd CTA	82%
Received ASA or AC after 2nd CTA	82%
Abbreviations: AC; anticoagulation, ASA; aspirin, CTA; computed tomography angiogram, MVA; motor vehicle accident, FFH; fall from height	

Abstract E-120 Table 2 Imaging outcomes of vascular injuries

Number of patients	Second CTA	Third CTA
Total	38	16
Normalized	9 (24%)	1 (6%)
Improved	2 (5%)	6 (38%)
Stable	14 (37%)	9 (56%)
Worse	13 (34%)	0%
Abbreviations: CTA; computed tomography angiogram. Normalized = morphology of all vessels back to normal. Improved = vessels morphology improved (increased flow, increased diameter, smaller pseudoaneurysm, etc.) Stable = similar characteristics to previous vascular imaging. Worse = vessels morphology worsened (decreased flow, decreased diameter, larger pseudoaneurysm, etc.)		

likely to be stable (RRR=33, CI 95% (2.9–374), $p=0.005$). Ten BCVIs (26%) completely resolved on repeat imaging (table 2). The rates of early (<2 weeks) and delayed (2 weeks to 3 months) ischemia were 5% and 0%, respectively. Endovascular stenting was performed in 8%.

Conclusion Short-term repeat non-invasive vascular imaging can help to identify the evolution of BCVI. Repeat vascular imaging at short intervals can help to identify patients who may require endovascular intervention, but additional studies are necessary to clarify its role in the management of BCVI.

Disclosures Z. Aljuboori: None. K. Meyer: None. R. James: None. D. Ding: None.

E-121

SALVAGE ENDOVASCULAR STRATEGIES IN A UNIQUE DUPLICATED INTERNAL CAROTID ARTERY LEADING TO CATASTROPHIC DISSECTION AND FUSIFORM ANEURYSM

Y Lodi*, B Pulgarin, Z Weiss, S Chin, V Reddy. *Neurology, Neurosurgery and Radiology, Upstate Medical University/UHS-Wilson Medical Center, Johnson City, NY*

10.1136/neurintsurg-2020-SNIS.153

Background Anatomical variance of duplicated internal carotid artery (ICA) is novel. However, duplication associated