Abstract E-023 Figure 1 Infarct evolution curves based on DWI lesion size for the four groups all data has been normalized to the rTTP total infarct size. Gray area represents the standards error of the mean

Results Of the 23 dogs used in the active group, 5 were excluded due to spontaneous recanalization or lack of sufficient infarct on DWI. From the included 18 dogs, 11 were identified as rapid progressors, and 7 as slow. The figure shows the average infarct growth rate for the four groups, showing the oxygen carrier increasing the time needed for the infarct to reach 50% of its expected size by approximately 45 minutes in the rapid group, and 30 minutes in the slow. Overall the final infarct size was reduced in both the rapid and slow groups, 0.99 vs 0.87 control versus treatment, and 0.97 vs 0.92 control versus treatment, respectively ($p < 0.001$ and 0.022).

Conclusions Oxygen carrier therapy shows promise to slow down the infarct growth after an LVO, allowing for more time to perform mechanical thrombectomy. Not only was the time to 50% infarct increased, but after 5 hours, the infarct in the oxygen carrier groups still showed an area of penumbra.

REFERENCE

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Disclosures R. King: None. M. Shazeeb: None. J. Kolstad: None. C. Raskett: None. J. Winger: 5; C; Omniox Inc. L. Kelly: 5; C; Omniox Inc. Z. Vardar: None. A. Kraitem: None. V. Anagnostakou: None. A. Krtolica: 5; C; Omniox Inc. N. Henninger: 1; C; K08NS091499. M. Gounis: None.

E-024

SPONTANEOUS VERTEBRAL ARTERIOVENOUS FISTULA MIMICKING BRACHIAL RADICULO-PLEXOPATHY: A CASE REPORT

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10.1136/neurintsurg-2020-SNIS.60

Vertebral arteriovenous fistulas (VAVF) are uncommon, high-flow communications between a vertebral artery and surrounding venous plexus that occur spontaneously or secondary to trauma. A 57-year-old female presented with a multi-day history of rapidly progressive numbness and weakness in the left C5-C6 dermatomyotomes. Her physical exam findings and subsequent electrophysiological testing were suggestive of a brachial radiculo-plexopathy. Noninvasive imaging demonstrated venous congestion with multilevel compromise of the left-sided cervical foramina, and subsequent vertebral angiography confirmed a VAVF, which was treated with trapping of the involved VA segment. Her numbness and weakness progressively improved with concurrent involution of the dilated veins. An exceptional case of VAVF manifesting as a brachial radiculo-plexopathy is presented. VAVF are rare, though they may be considered as a potential underlying cause in patients with comparable symptoms. Endovascular embolization has been demonstrated as a safe and efficacious method in treating VAVFs, though multiple patient-specific factors must be contemplated.

Disclosures A. Larson: None. L. Rinaldo: None. C. Arnold Fiebelkorn: None. N. Young: None. G. Lanzino: None.

E-025

TRANSORBITAL ENDOVASCULAR EMBOLIZATION OF CAROTID-CAVERNOUS FISTULAS: A CASE SERIES

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10.1136/neurintsurg-2020-SNIS.61

Introduction/Purpose Carotid-cavernous fistulas (CCFs) are typically managed by embolization, with varied approaches described. Direct transorbital venous access may be utilized if anatomic constraints limit fistulous access via standard venous or arterial access. We present eight cases of successful CCF obliteration through direct transorbital puncture of the cavernous sinus or through indirect cannulation via the superior or inferior ophthalmic veins.

Materials and Methods Patient data was gathered through retrospective chart review from August 2017 to December 2019. Demographics, fistula type, treatment method, obliteration status, and complications were recorded.

Results Eight patients (M:4, F:4, age 44 ± 15 years) were identified who underwent a transorbital approach for treatment of CCF. Six CCFs were spontaneous, and two were deemed to be traumatic in nature following motor vehicle accidents. One patient had a direct fistula (Barrow type A), while the remainder had indirect fistulas (Barrow types B, C, D). Three patients underwent a direct transorbital embolization; one underwent transarterial embolization followed by transorbital embolization; one underwent transarterial embolization, attempted transvenous embolization, followed by a direct transorbital embolization; one underwent attempted transvenous embolization followed by direct transorbital embolization; and two underwent transarterial embolization, followed by transvenous embolization, followed by direct transorbital embolization.

Fistulous occlusion was achieved in all patients following transorbital embolization. Seven patients demonstrated complete resolution of ophthalmic symptoms with normalization of intraocular pressures. One of these patients required an immediate post-operative lateral canthotomy due to transient