The analysis was performed by a cardiologist with clinical expertise in OCT imaging, who was also blinded to group allocation.

Results Post-deployment digital subtraction angiography demonstrated that VEGF-coated stents were deployed similar to uncoated stents, and without any obvious acute thrombus formation. Using two-tailed paired t-tests, the 72h VEGF group showed significantly higher (p<0.01) neointimal area and neointimal ratio compared to 72h Control group. The minimal neointimal thickness of 72h VEGF group was significantly higher (p<0.05) than the 72h Control group, but not statistically different than the 7d Control group. There was a trend toward decreased thrombus formation in 72h VEGF group versus the 72h Controls (p=0.07). The 7d Controls had significantly higher stent-strut neointimal coverage ratio, neointimal area, neointimal ratio and maximum neointimal thickness compared to the 72h VEGF group (p<0.05) and 72h Control group (p<0.05).

Conclusion VEGF-coated stents are a promising biomodification to reduce secondary complications that may occur in the initial days following the procedure.

Disclosures
K. Panchendrabose: None. B. Har: 3; C; Abbot. A. Mitha: 1; C; Stryker Neurovascular. 2; C; Microvention Inc., Cerus Endovascular, Stryker Corporation. 4; C; Fluid Biotech Inc.

Introduction
Implantation of cerebral stents are used in several disease conditions. Although stenting procedures offer many benefits, metal stents can elicit acute/subacute thrombosis and increase the chance of stroke. The risk of in-stent thrombus formation significantly decreases after formation of an endothelial cell layer over the stent, which typically takes several weeks to occur. One potential way to reduce the formation of thrombus is through biologic modifications that hasten endothelialization. In past studies, vascular endothelial growth factor (VEGF) has been shown to facilitate the recruitment and proliferation of cells that leads to endothelialization.

Methods
In this study, VEGF was coated onto Solitaire stents using polylactic-co-glycolic acid (PLGA). Coated stents were deployed into the infrarenal abdominal aorta of New Zealand White rabbits for 72 hours (n=5) (72h VEGF group) and compared to uncoated stents at 72 hours (n=3) (72h Control group) and seven days (n=3) (7d Control group). Optical coherence tomography (OCT) was performed through the stented portion of the vessel, and representative images taken every five millimetres were used for analysis. Images were analyzed for neointimal area (stent area – lumen area), neointimal ratio (stent area – lumen area)/stent area), minimal and maximal neointima thickness, stent-strut neointima coverage ratio (number of struts covered by a neointimal layer over the total number of struts), as well as thrombus area formation.
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 dermatomes. 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.

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E-025
TRANSORBITAL ENDOVASCULAR EMBOLIZATION OF CAROTID-CAVERNOUS FISTULAS: A CASE SERIES


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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...