

Discussion It is reasonable to think that any chance to practice a procedure prior to the final attempt at treatment would be beneficial to the physician and, by extension, the patient. This study shows that replicator practice sessions are feasible as long as the replicator model is a functional and faithful representation of the patient's vasculature. In many cases, the replicator session provided an opportunity to correctly size the endovascular device, and avoid resheathing these devices in the patient's intracranial vasculature during the actual procedure. This has the potential to reduce operative time and lower the risk of complications. But the benefits are not limited to properly sizing implants. Even just a chance to rehearse the maneuvers of a procedure benefit the patient in terms of helping to avoid difficulty during the treatment procedure.

Conclusion Difficult endovascular cases, or cases in which a new technology is being used, benefit from a practice session with an individualized 3D model, created to represent the patient's intracranial vasculature. This holds true only when the 3D model is a functional and accurate reflection of the individual's anatomy.

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E-091

TREATMENT OF ANEURYSMS OF THE PERICALLOSAL ARTERY WITH THE PIPELINE EMBOLIZATION DEVICE

¹A de Macedo Rodrigues, ¹A Kühn, ¹T Tamura, ²G Dabus, ³P Kan, ¹M Marosfoi, ¹J Lozano, ¹M Howk, ¹M Perras, ¹C Brooks, ¹D Rex, ¹F Massari, ¹M Gounis, ¹A Wakhloo, ¹A Puri. ¹Radiology, University of Massachusetts Medical School, Worcester, MA; ²Baptist Cardiac and Vascular Institute, Miami, FL; ³Neurosurgery, Baylor College of Medicine, Houston, TX

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Background/objective Pericallosal artery aneurysm treatment is challenging using traditional endovascular techniques due to the small caliber of the parent vessel and distal access. Wide neck and bifurcation aneurysms in this location require manipulation with 2 catheters for balloon assisted or stent assisted coil embolization with increased friction and limited margin for error. We demonstrate the feasibility, efficacy and safety of endovascular treatment of pericallosal artery aneurysm using flow diversion technology.

Methods We performed a retrospective review of our institutional database from July 2013 through July 2015. Five subjects with a pericallosal artery aneurysm that was treated with the Pipeline embolization device (PED) were identified. We evaluated for technical feasibility, presence of procedural complication, angiographic results, and clinical outcome.

Results Successful placement of a single PED across the neck of the aneurysm was achieved in all cases. No procedure-related complications were encountered. A 6 month follow-up angiogram was available for 4 patients and a 12 month follow-up angiogram was available for 2 patients. Four out of 5 patients had complete aneurysm occlusion demonstrated, 3 of them were demonstrated at the 6 month follow-up and 1 at 12 month follow-up. The subject for which occlusion was demonstrated at the 12 month follow-up did not have a 6 month angiogram available for review. One patient had

persistent aneurysm filling at 6 month, with a 50–60% decrease in aneurysm size. There were 2 cases of narrowing of at the origin of an artery that had been covered by the PED, without flow limitation or clinical consequences. There was no evidence of in-stent stenosis or intimal hyperplasia. No thromboembolic or hemorrhagic complication was seen. Modified Rankin scale scores remained unchanged from baseline.

Conclusions Our preliminary results support the use of flow diverter stent for treatment of aneurysms of the pericallosal artery with high rate of aneurysm occlusion, without evidence of increased procedural complication or short-term morbidity. A long-term and larger cohort study is desirable to validate our results.

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E-092

COIL EMBOLIZATION OF INDIRECT CAROTID-CAVERNOUS FISTULA: THE ROLE OF DYNACT IN PRE-TREATMENT PLANNING

¹A Botsford, ²J Shiva Shankar. ¹Diagnostic Radiology, Dalhousie University, Halifax, NS, Canada; ²Division of Neuroradiology, Dalhousie University, Halifax, NS, Canada

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Introduction/purpose Indirect Carotid-Cavernous Fistulas (CCF) are arterio-venous shunts between branches of the ICA, ECA or both and the cavernous sinus. Indirect CCFs are treated with coil embolization when they present with orbital/visual symptoms or if there is cortical venous reflux. The target for endovascular treatment in indirect CCF is the occlusion of the venous side of the fistula. Due to intricate anatomy of the cavernous sinus, the fistula site and foot of the draining venous structure are difficult to localize with confidence. This makes treatment a complex and long procedure requiring a large number of coils. Most of the time the treatment is done without actually localizing the fistula site and by packing the whole cavernous sinus with coils, sometimes resulting in additional complications, long procedure times and a large number of coils used per procedure.

The purpose of this study was to examine the role of DynaCT in pre-treatment localization of the fistula site for indirect CCF, and to examine if identification of fistula site would improve treatment by shortening the procedure time, requiring fewer coils or by reducing complication rate.