**Materials and Methods** Between May 2015 and January 2021, E.Meshalkin National Medical Research Center and Federal Center of Brain and Neurotechnologies treated 131 AVM patients using PHIL. By January, the treatment had been completed in 70 of the patients; 59 were undergoing a staged embolization, and 2 patients had died between stages due to an AVM rupture. The data for analysis were accumulated in a prospective database.

**Results** The cohort for analysis included the 70 patients whose treatment was finalized. Total occlusion was achieved in 50 patients (71.4%). Among them, 28 underwent a single-stage embolization. In 14 patients (28%), the procedure was performed using PHIL only. A procedure, where using PHIL was combined with a single-stage microsurgical resection was performed in 2 (4%) cases. The remaining 35 patients (50%) underwent embolization with a combination of embolizing agents (Onyx, Squid, N-BCA) as during a single as during a multi-stage treatment. Seven patients (10%) underwent a subtotal embolization with single-stage microsurgical resection. In 6 patients (8.6%) subtotal embolization was followed by radiosurgery. Partial AVM occlusion with microsurgical resection and partial embolization with radiosurgical treatment were performed in 1 (1.4%) and 3 (4.3%) patients, respectively. Partial AVM occlusion only was performed in 3 patients (4.3%). Intra-and postoperative complications were registered in 37 cases (53%). Persistent neurological deficiency developed in 4 patients (5.7%), including the two after partial embolization. The mortality rate comprised 1.4% to be 1 patient after partial AVM embolization.

**Conclusion** PHIL is an effective tool for treatment of brain AVMs. The agent has a high degree of initial occlusion and is safe if compared to the other liquid embolization materials. However, large-scale multicenter studies are required to determine the embolizer’s safety profile and to estimate its long-term efficacy.

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**E-110**

**TRANSRADIAL, COAXIAL APPROACH USING SURPASS EVOLVE FOR TREATMENT OF CEREBRAL ANEURYSMS**

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**Introduction** The transradial approach (TRA) is being employed to a greater degree in neuroendovascular procedures. Multicenter studies examining TRA versus transfemoral approach (TFA) across all neuroendovascular procedures have demonstrated lower rates of both minor and major complications using TRA. Previous studies have described TRA for flow diversion using the Pipeline embolization device (ev3/Chestnut Medical, Menlo Park, California) with good result. The Surpass Evolve device (SED; Stryker Neurovascular, Kalamazoo, Michigan, USA) is a new 64-wire flow diverting stent that obtained FDA approval in 2020. In this study we present a single center experience of patient who underwent TRA for placement of Surpass Evolve flow diversion for treatment of cerebral aneurysms.

**Methods** We performed a retrospective review of patient who underwent TRA for SED placement for treatment of aneurysm between August 2020 to February 2021. Patient demographic, procedural techniques, clinical and angiographic data were recorded.

**Results** 15 patients underwent SED placement for treatment of aneurysm (age 46.6, 62.5% female). 81% of patients had hypertension, 43% had hyperlipidemia, and 75% were current or former smokers. 3 (20%) patients presented with ruptured aneurysms. 7 (47%) patients had undergone previous aneurysm treatment. 5 patients (33%) had recurrence of their previously treatment aneurysm. 1 patient was converted to TFA after attempted TRA due to vasospasm. The following aneurysms were treated: anterior communicating artery aneurysm in 3 patients, ophthalmic artery aneurysm in 3 patients, anterior choroidal artery aneurysm in 3 patients, superior hypophyseal artery aneurysm in 3 patients, vertebral artery aneurysm in 2 patients, posterior communicating artery aneurysm in 1 patient, cervical carotid artery aneurysm in 1 patient, and a fusiform cavernous carotid aneurysm in 1 patient. The right radial artery was used in all cases. Mean radial artery diameter was 2.64 mm. A 5/6 French slendersheath was utilized in all cases. Coaxial system was used in all cases. Mean smallest parent vessel diameter measured 3.52 mm, and mean largest parent vessel diameter measured 4.06 mm. Placement of the TFA flow diversion device was successful in all cases. Balloon angioplasty was used in 5 (33%) patients to achieve wall apposition. No patients had access site complications. There were no procedural or postoperative neurological complications. 1 patient had proximal shelfing of SED. The patient required retreatment with good outcome using an atlas stent.

**Conclusions** TRA is a safe and feasible approach for flow diversion using the Surpass Evolve device. Rates of access site complications is favorable. Overall rate of conversion to TFA is low. Our early experience suggests frontline TRA is feasible for the utilization of Surpass Evolve flow diverting device.