

E-233 POST MARKET REGISTRY FOR ENDOVASCULAR TREATMENT OF INTRACRANIAL ANEURYSMS USING THE I-ED COIL SYSTEM

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Background Since the International Subarachnoid Aneurysm Trail (ISAT) there has been ongoing interest in coil embolization for the treatment of intracranial aneurysms. This has led to the development of new and improved coils and adjunctive devices, which have expanded the scope of endovascular practice to include more challenging lesions than could be treated previously.

Method The i-ED Coil System consists of the embolization coils and the i-ED Electro Detachment Generator. The Kaneka Endovascular Embolization and Protection (KEEP) study is a post-market registry to obtain, assess and describe real-world clinical data and characterize the acute and long-term performance of the i-ED COILs when used alone or in combination with adjunctive device(s), in patients treated for intracranial aneurysms. This is a prospective, multi-center, single-arm, post-market registry for bifurcation and sidewall aneurysms, 4 to 14 mm in size, and includes both ruptured and unruptured aneurysms. The study will enroll up to 164 patients with 147 evaluable patients. Detailed results from enrollment through 1-year outcomes will be published upon completion of the registry. The primary objective is the proportion of patients, assessed by the independent core lab, who achieve adequate occlusion (Modified Raymond Roy Classification I or II (MRRC)) of the target aneurysm at 12 months without retreatment. The secondary outcomes include packing density, defined as the ratio of the aneurysm volume to the volume of coil, change(s) in long-term aneurysm occlusion rate using the MRRC Scale, and independent functional outcome using the modified Rankin Scale (mRS). Procedure and/or device/iED COIL related serious adverse events will be adjudicated by a medical monitor.

Results The first patient was enrolled in December 2022. With ongoing enrollment of the 147 evaluable patients, 7 patients have been enrolled to date that met the inclusion and exclusion criteria with aneurysms in both the anterior and posterior circulation; six-month follow-up will be available on all of these patients in the first half of this year. In this multi-center post-market registry, 5/7 aneurysms achieved immediate adequate occlusion. One-year, long-term follow-up is not yet available. Good clinical outcome (mRS 0-2) at discharge was seen in 7/7 patients and at six (6) months the mRS will be available and reported on. No serious adverse events have been reported. The updated dataset will be presented at the SNIS meeting.

Conclusion One-year data will be published when available and will include long-term occlusion status, coil durability, and recurrence rates as well as clinical outcomes. Clinical Trial Registration: www.ClinicalTrials.gov, identifier: NCT:05563051

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E-234 PREVALENCE AND PREDICTORS OF BRACHIORADIAL ARTERY ANATOMY IN NEUROINTERVENTIONAL PROCEDURES

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Background Trans-radial artery (TRA) access for neurointerventional procedures continues to garner increase usage among interventionalist. While TRA approaches are associated with a decreased risk of major access site complications, such issues can occur with a retained catheter, one of the most dreaded complications. Previously, the brachioradial artery (BR), specifically proximal BR, has been postulated to be associated with a retained catheter. Herein, the prevalence and predictors of BR in neurointerventional procedures is investigated in a large quaternary center. **Methods**

All patients who underwent a neurointerventional procedure during a 13-month period were retrospectively analyzed for a TRA approach and included in the study. Distal BR were defined as 10-20 cm proximal to the intercondylar line, with proximal BR defined as >20 cm. A multivariable logistic regression analysis was performed for predictor of a BR.

Results During the study period, 751 patients were found to meet inclusion criteria and analyzed. Of these patients, 51 (6.8%) had proximal or distal BR, of which 36 (4.8%) had proximal origins. On multivariate analysis, it was found that females (OR = 2.5 (95% CI: 1.1 - 6.1), p = 0.026) and Black patients (OR = 12.3 (95% CI: 2.0 - 62.4), p = 0.01) were more likely to have a proximal BR. Radial artery diameter was not a predictor for a BR. However, female patients were associated with smaller diameters (<0.27cm; OR 2.1 (95% CI 1.5-3.1), p <0.001).

Conclusion The brachioradial artery variant is found in nearly 7% of patients undergoing a neurointerventional procedure, with Black race and female gender found to be predictors of proximal BR origin. Thus, appropriate vigilance is required when treating these demographics for a neurointervention.

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E-235 DISTAL EMBOLI AFTER THROMBECTOMY: FACTORS ASSOCIATED WITH TISSUE INFARCTION OR SURVIVAL

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Background Distal emboli after thrombectomy are common. The purpose of this study was to determine factors associated with tissue infarction or survival in the territory of distal emboli.

Methods We reviewed clinical and imaging data from 358 patients with large vessel occlusions (LVOs) who underwent thrombectomies from 2015-2018. 71 patients were identified with distal emboli after thrombectomy and follow up MR