SAFETY AND EFFICACY OF TRACSTAR LARGE DISTAL PLATFORM DURING ENDOVASCULAR TREATMENT OF INTRACRANIAL ANEURYSMS

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Introduction Increased procedure time during endovascular treatment of cerebral aneurysms is associated with increased anesthesia related complications and radiation exposure. Elimination of the need for intermediate catheters during aneurysm treatment may decrease procedure time and increase cost effectiveness. A novel device -the TracStar Large Distal Platform (LDP) -may offer more distal final positioning when compared to commonly used guide catheters, thus decreasing the need for guide catheter use. We investigate the safety and efficacy of the TracStar LDP when used during endovascular aneurysm treatment.

Methods We perform a multicenter retrospective review of endovascular cerebral aneurysm embolizations during which the TracStar LDP was utilized. Aneurysm location, procedural information, and complications were recorded as detailed in the operative note. Vascular tortuosity was assessed via pre-procedural CTA. Distal-most position achieved with TracStar was determined by review of intra-procedural imaging.

Results A preliminary analysis of 30 cases was performed. Flow diversion was performed in 25 cases (83%), and stent assisted coiling was performed in the remainder. The target aneurysm was located in the ICA in 27 cases (90%), the MCA bifurcation in 2 cases (7%), and the ACA in 1 case (3%). An intermediate catheter was required in 18 cases (60%). TracStar LDP achieved stable access to the Cavernous ICA in 70% of cases. Average procedure time was 67 ± 33 minutes. There were no procedural complications or new neurologic defects after treatment. TracStar LDP was exchanged for an alternative guide catheter in one case due to catheter kinking, and in two cases due to lack of support.

Conclusion Use of Tracstar LDP during flow-diversion and sent-assisted coiling of cerebral aneurysms is safe and effective. Access to the cavernous segment of the ICA was achieved in the majority of cases, and use of an intermediate catheter was not required in 40% of cases. Final analysis of the the full 60 patient multi-center study will be available for presentation at SNIS Annual 2020.

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Racial Disparities in Acute Stroke Thrombectomy Management and Outcomes in the United States: Evidence from the NVQI-QOD Registry

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ABSTRACT

BACKGROUND: Racial disparities in stroke thrombectomy management and outcomes, with minorities exhibiting increased post-procedural NIHSS, length of stay, and ICU days. Although African Americans were noted to suffer less from worst-case scenarios revealed significant differences between African Americans and Caucasians for post-procedure length of stay (mean 10.9 versus 7.9; p<0.001), 24-hour NIHSS (mean 11.2 versus 10.3; p=0.037), ICU days (mean 4.4 versus 3.1; p<0.001), and in-hospital mortality (14.6% versus 24.5%; p<0.001). Differences between Hispanics and Caucasians were seen for post-procedural length of stay (mean 10.1 versus 7.9; p=0.010), 24-hour NIHSS (mean 12.1 versus 10.3; p=0.046), and ICU days (mean 4.3 versus 3.1; p=0.011). Differences between Asians and Caucasians were seen for post-procedure length of stay (mean 10.2 versus 7.9; p=0.004) and ICU days (4.6 versus 3.1; p<0.001). Multivariate regression models, with Caucasian set as the reference group, showed higher post-procedure length of stays for African Americans (p<0.001) and Asians (p=0.026), and higher ICU days for African Americans (p<0.001) and Asians (p=0.003).

CONCLUSION Evidence from the NVQI-QOD registry suggests that there are several racial disparities in stroke thrombectomy management and outcomes, with minorities exhibiting increased post-procedural NIHSS, length of stay, and ICU days. Although African Americans were noted to suffer less in-hospital mortality compared to Caucasians, this did not translate into increased odds of a favorable clinical outcome at 90 days.


Abstracts

including. All subjects will be followed for approximately 1 year. The primary efficacy endpoint is adequate occlusion defined as Raymond-Roy Occlusion Class I and II at final follow-up. The primary safety endpoints are serious adverse events (SAE) within 24 hours post-procedure and device-related SAE up to 7 days or discharge. Imaging will be analyzed by an independent core lab to assess aneurysm occlusion rates at follow-up. Imaging modalities include DSA, computed tomography angiography (CTA), and/or MRA. A comparative analysis between imaging modalities will be performed for patients with DSA and MRA.

RESULTS The trial is currently recruiting. Enrollment began November 2019 and the estimated date for study completion is June 2023. Imaging and clinical data collection and core laboratory review are ongoing.

CONCLUSION We report the design of the SURF study, a post-market registry that evaluates the safety and performance of the Penumbra SMART COIL System, including WAVE as a fill and finished coil, in the treatment of intracranial aneurysms.

REFERENCES


Late-Breaking Oral Abstracts

LB-001 Racial disparities in acute stroke thrombectomy management and outcomes in the United States: Evidence from the NVQI-QOD Registry

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Introduction Endovascular mechanical thrombectomy is the standard of care treatment for acute ischemic stroke secondary to large vessel occlusions, but racial disparities in stroke interventional management and outcomes are not well studied. Moreover, a robust analysis of multiple relevant variables, with consideration of possible confounders, has not been previously conducted. We aimed to evaluate real-world evidence for racial differences in stroke thrombectomy management, short- and long-term outcomes using the Neurovascular Quality Initiative-Quality Outcomes Database (NVQI-QOD) registry.

Methods Data from the NVQI-QOD registry database were analyzed and compared for racial differences with respect to technical and functional outcomes of stroke thrombectomy in 3281 patients from 23 US centers (17 states) between Jan 2015 to March 2020. Race was classified into 4 groups: 1) Caucasian (n=2484), 2) African American (n=563), 3) Hispanic (n=109), and 4) Asian (n=105). Analysis of variances (ANOVA), Chi-square tests, Mann Whitney U tests, and multivariate regression models were used to assess racial disparities for 10 outcome variables: final thrombolyis in cerebral infarction (TICI) grade (n=3182), 24 hour NIH stroke score (NIHSS) (n=2850), post-procedure length of stay (n=3257), ICU days (n=2787), in-hospital mortality (n=3259), discharge status (n=3281), discharge NIHSS (n=2426), discharge modified Rankin score (mRS) (n=996), 90 day re-admission rate (n=416), and 90 day mRS (n=1184). Regression models controlled for demographics, comorbidities, intravenous tPA thrombolysis, and pre-stroke functional measures.

Results ANOVA and Chi-square tests revealed significant differences between racial group means including post-procedure length of stay (p<0.001), ICU days (p<0.001), and in-hospital mortality (p<0.001). There were no significant differences between racial group means for discharge mRS without mortality (African American: 26.7% favorable outcome, Caucasian: 26.8%, Hispanic: 27.8%, Asian: 23%; p=0.90) or for 90 day mRS without mortality (African American: 56.5% favorable outcome, Caucasian: 51.3%, Hispanic: 37.5%, Asian: 44.4%; p=0.54). Additional analyses revealed significant differences between African Americans and Caucasians for post-procedure length of stay (mean 10.9 versus 7.9; p<0.001), 24 hour NIHSS (mean 11.2 versus 10.3; p=0.037), ICU days (mean 4.4 versus 3.1; p<0.001), and in-hospital mortality (14.6% versus 24.5%; p<0.001). Differences between Hispanics and Caucasians were seen for post-procedure length of stay (mean 10.1 versus 7.9; p=0.010), 24-hour NIHSS (mean 12.1 versus 10.3; p=0.046), and ICU days (mean 4.3 versus 3.1; p=0.011). Differences between Asians and Caucasians were seen for post-procedure length of stay (mean 10.2 versus 7.9; p=0.004) and ICU days (4.6 versus 3.1; p<0.001). Multivariate regression models, with Caucasian set as the reference group, showed higher post-procedure length of stays for African Americans (p<0.001) and Asians (p=0.026), and higher ICU days for African Americans (p<0.001) and Asians (p=0.003).

Conclusion Evidence from the NVQI-QOD registry suggests that there are several racial disparities in stroke thrombectomy management and outcomes, with minorities exhibiting increased post-procedural NIHSS, length of stay, and ICU days. Although African Americans were noted to suffer less in-hospital mortality compared to Caucasians, this did not translate into increased odds of a favorable clinical outcome at 90 days.