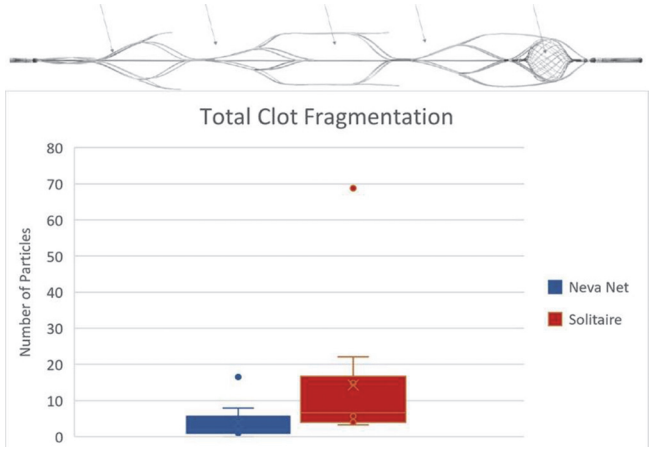

Abstract P-012 Figure 1

test article (Neva Net) was compared to gold standard stent-retriever thrombectomy with the Solitaire device (Medtronic, Irvine CA) and were block randomized with 10 replicate experiments for each device. All effluent was collected from the MCA and ACA territories separately for emboli analysis. We also measured the number of passes required to achieve complete recanalization.

Results In all experiments with the Neva Net, first-pass complete recanalization was achieved, whereas with the control device it was only 60% (p=0.03). The median number of clot fragments with a diameter of 1mm or more was 4-fold higher with the control device versus the Neva Net (p=0.037). More clot fragments with diameters between 0.2 and 1 mm were found in the control group versus the Neva Net (p=0.048).

Conclusion Stent-retrievers with integrated drop zones and distal embolic filter have increased first pass complete recanalization and reduce the amount of clot fragmentation leading to distal emboli.

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P-013 THE NEED FOR SPEED: REDUCING ENDOVASCULAR TREATMENT TIMES IN ISCHEMIC STROKE

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Background Endovascular treatment (EVT) of vascular occlusions in the treatment of disabling strokes is more effective if reperfusion is achieved quickly. [1,2] Streamlining protocols from patient presentation to groin puncture can lead to improved timelines to treatment and functional outcomes.[3] This is a follow up to our SNIS 2020 virtual presentation to demonstrate this projects continued effectiveness in reducing door to first pass times.

Purpose The purpose of this study was to identify the impact of specific hospital-based process improvement strategies in the acute ischemic stroke patient population undergoing endovascular therapy with the specific intent to decrease median arrival to groin puncture. The initial process improvement meetings occurred in fiscal year (FY) 2014 and 2015 which was our first phase. The second phase of this project began in November 2018 (FY 2019), this included multidisciplinary team meetings to update our endovascular stroke workflows to save additional time. Implementation of the group's recommendations began FY 2020 (9/1/19- 12/31/19). Some PI implemented workflow changes included: early endovascular team activation, a streamlined transport process, a streamlined patient preparation process in the lab, utilization of a feedback tool and multidisciplinary buy-in/engagement of all who care for our acute stroke patients.

Methods The study includes a pre- and post-intervention retrospective review of consecutive patients 18 years or older, with hospital admissions between January 1, 2014 and December 31, 2022, who underwent EVT for treatment of acute ischemic stroke. Inpatient stroke activations were excluded from analysis. The primary outcome variables were time from arrival to groin puncture and first pass during the acute ischemic stroke admission. The data points were collected from internal stroke review dataset and anonymized prior to analysis. All thrombectomy's at our site are performed under general anesthesia.

Results Phase one of this project lead to a 42 minute decrease in door to first pass time. In FY 2017 (9/1/16-9/1/17) and FY 2018 (9/1/17-9/1/18), prior to the second phase of our project, our median door to groin puncture times were 94 minutes in FY 2017 (n=37) and 113 minutes in FY 2018 (48 patients). Our median door to first pass times were 114 minutes in FY 2017 and 139 minutes in FY 2018. Post intervention our door to groin puncture times were 64 minutes in FY 2019 (n=64) and 56 minutes in FY 2020 (n=35). Our median door to first pass times were 86 minutes in FY 2019 and 74 minutes in FY 2020. We have continued our process and for FY2021 (n=42) our median door to groin puncture time was 48 minutes and our door to first pass time was 67 minutes (p<.05), a statistically significant improvement of 47 minutes from baseline FY2017 and 72 minutes from baseline FY2018.

Conclusions Improving awareness of process expectations by meeting with stakeholders resulted in a substantial and sustainable decreases in median door to groin puncture and door to first pass times. Implementation of hospital-based PI multidisciplinary team initiatives helped improve our sites work flow and continued to improve our door to 1st pass times.

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