



The TREVO Registry-Subgroup Analysis, Treatment Beyond 6 Hours

Mandy Jo Binning MD; Erol Veznedaroglu MD; Ronald Budzik; Joey English; Blaise Baxter; Bruno Bartolini; David S.

Liebeskind MD; Antonin Krajina; Rishi Gupta MD; Raul G. Nogueira MD

On behalf of the Trevo Retriever Registry Investigators



Introduction

Current randomized trials demonstrating superiority of mechanical thrombectomy for the treatment of acute ischemic stroke for anterior circulation large vessel occlusion, have enrolled patients with symptom onset up to 6 hours. Outcomes of thrombectomy beyond 6 hours have not been well studied. The Trevo Registry is designed to assess real world outcomes of the Trevo Retriever in patients experiencing acute ischemic stroke. This is the largest prospective study for acute stroke intervention that has currently enrolled 2010 patients. Outcomes of patients treated beyond 6 hours of symptom onset were studied.

Methods

The study design is a prospective, open-label, consecutive enrollment, multi-center, global registry of all patients who undergo mechanical thrombectomy for acute stroke using the Trevo stent retriever as the initial device. Subgroup analysis of enrolled patients treated beyond 6 hours of symptom onset and with 90-day follow-up was performed.

Real World Experience

No upper age limit

Pre-stroke mRS 0-5 included

No lower or upper NIHSS

With or without tPA

No time limit from TLSW to treatment

Inclusive of distal and posterior

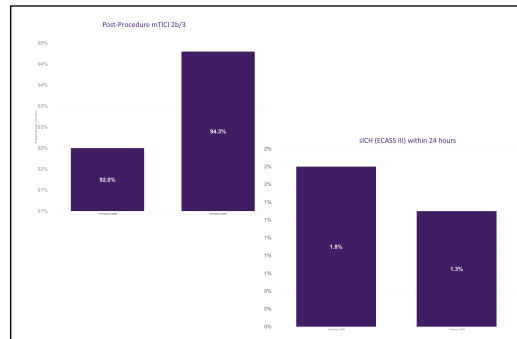
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Results

As of August 4, 2017, a total of 2010 patients were enrolled. The median NIHSS at admission was 15.5 (IQR 11-20). The majority of patients (69.5%) were treated at 6 hours or less from last known normal with a median procedure time of 50 minutes (33-74). In patients treated after 6 hours from time last known well, the revascularization rate was 83.6% with symptomatic ICH of 1.3% and 90-day mRS = 2 was 51.4%.

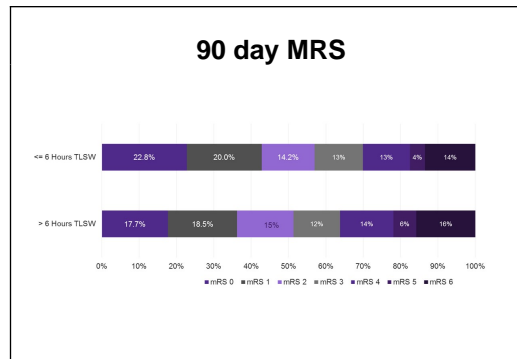
	≤ 6 hour T1SW	> 6 hours T1SW
	N=1362	N=599
Age (mean ± SD)	68.7 ± 14.3	67.2 ± 14.5
% Female	52.1 %	52.4 %
Hypertension	74.4 %	73.4 %
Dyslipidemia	45.7 %	46.1 %
Atrial Fibrillation	37.2 %	32.0 %
Diabetes Mellitus	23.2 %	25.9 %
Median Baseline NIHSS (IQR)	16(11-20)	15(9-20)
% IV PA	67.4 %	20.6 %

Subgroup analysis of patients presenting within 6 hours of symptom onset and those presenting beyond 6 hours showed no significant difference in patient demographics or medical comorbidities. In addition, there was no difference in complication rate between the two groups.



PROCEDURAL EVENTS		
	<= 6 Hours TLSW N=182	> 6 Hours TLSW N=599
Last Known Well to Arterial Puncture (median hrs)	3.5	9.8
Number of Trevo Retrievers Used (median)	1	1
mTICI 2b/3 after first Trevo Pass	63.9%	59.9%

ADDITIONAL OUTCOMES		
	<= 6 Hours TLSW	> 6 Hours TLSW
24-hour NIHSS (IQR)	(2-13)	(7(3-15)
Procedure or Device-related Serious Adverse Events	2.1%	2.0%
Neurological Deterioration at 24 h (≥ 4pt NIHSS increase from Baseline)	4.0%	5.7 %
Emboli to New Territory	2.1%	1.5%



Conclusions

The Trevo Retriever Registry represents the first look at real world data with stent retriever use in the era of clinical trials showing the overwhelming benefit of stent retrievers to treat acute ischemic stroke. This data represents real world use of the Trevo Retriever including those treated beyond 6 hours after stroke symptoms (31.4%), and this data adds to the results from recent trials with restricted eligibility criteria.

Learning Objectives

Stroke intervention beyond 6 hours of symptom onset can be safe in carefully selected patients

