

2-2019

Impact of Early Mobilization on 90-Day Outcomes in Thrombectomy Patients

Tamela Stuchiner

Providence Brain and Spine Institute, Providence Health and Services, Portland, OR,
TAMELA.STUCHINER@providence.org

Diane Clark

MDProvidence Brain and Spine Institute, Providence Health and Services, Portland, OR, diane.clark@providence.org

Lindsay Lucas

MDProvidence Brain and Spine Institute, Providence Health and Services, Portland, OR

John Robinson

MDProvidence Brain and Spine Institute, Providence Health and Services, Portland, OR

Lisa Yanase

MDProvidence Brain and Spine Institute, Providence Health and Services, Portland, OR, Lisa.Yanase@providence.org

Follow this and additional works at: https://digitalcommons.psjhealth.org/other_pubs

Part of the [Neurology Commons](#)

Recommended Citation

Stuchiner, Tamela; Clark, Diane; Lucas, Lindsay; Robinson, John; and Yanase, Lisa, "Impact of Early Mobilization on 90-Day Outcomes in Thrombectomy Patients" (2019). *Books, Presentations, Posters, Etc.*. 70.
https://digitalcommons.psjhealth.org/other_pubs/70

This Poster is brought to you for free and open access by Providence St. Joseph Health Digital Commons. It has been accepted for inclusion in Books, Presentations, Posters, Etc. by an authorized administrator of Providence St. Joseph Health Digital Commons. For more information, please contact digitalcommons@providence.org.

Impact of Early Mobilization on 90-Day Outcomes in Thrombectomy Patients

Tamela Stuchiner, MA; Diane Clark, ACNP; Lindsay Lucas, MS; John Robison, IV, ACNP; Lisa Yanase, MD
Providence Brain and Spine Institute, Providence Health and Services, Portland, OR

Background / Objective

An early mobility protocol was used to increase early mobilization for ischemic stroke patients post IV alteplase treatment at two urban certified stroke centers. A prior study conducted at these hospitals showed that early mobilization did not worsen 90-day outcomes.¹

To our knowledge, there are no studies evaluating outcomes of early mobilization after thrombectomy.

Given the increased treatment time window, more patients will be eligible for thrombectomy.²

The objective of this study was to determine whether earlier mobilization of patients impacted outcomes at 90 days for thrombectomy patients treated per the early mobility protocol.

Methods

Medical records of ischemic stroke patients receiving thrombectomy at two urban certified stroke centers between May 2013 and December 2017 were reviewed for early mobilization per the early mobility protocol (within 24 hours of groin puncture).

Mobilization was started after groin precautions were complete and the groin puncture site was stable.

Patients who did not expire in hospital and had complete data were included in the analysis.

Ordinal regression was used to determine if, with each hour delay in time first mobilized, patients' functional outcomes worsened at 90 days using the modified Rankin scale (mRS), adjusting for pre-symptom onset mRS, admission NIHSS, age, sex, and post-treatment thrombolysis in cerebral infarction (TICI) grade.

The mRS at 90 days was categorized as no symptoms or no significant disability (0 - 1), slight or moderate disability (2 - 3), and severe disability or death (4 - 6).

Results

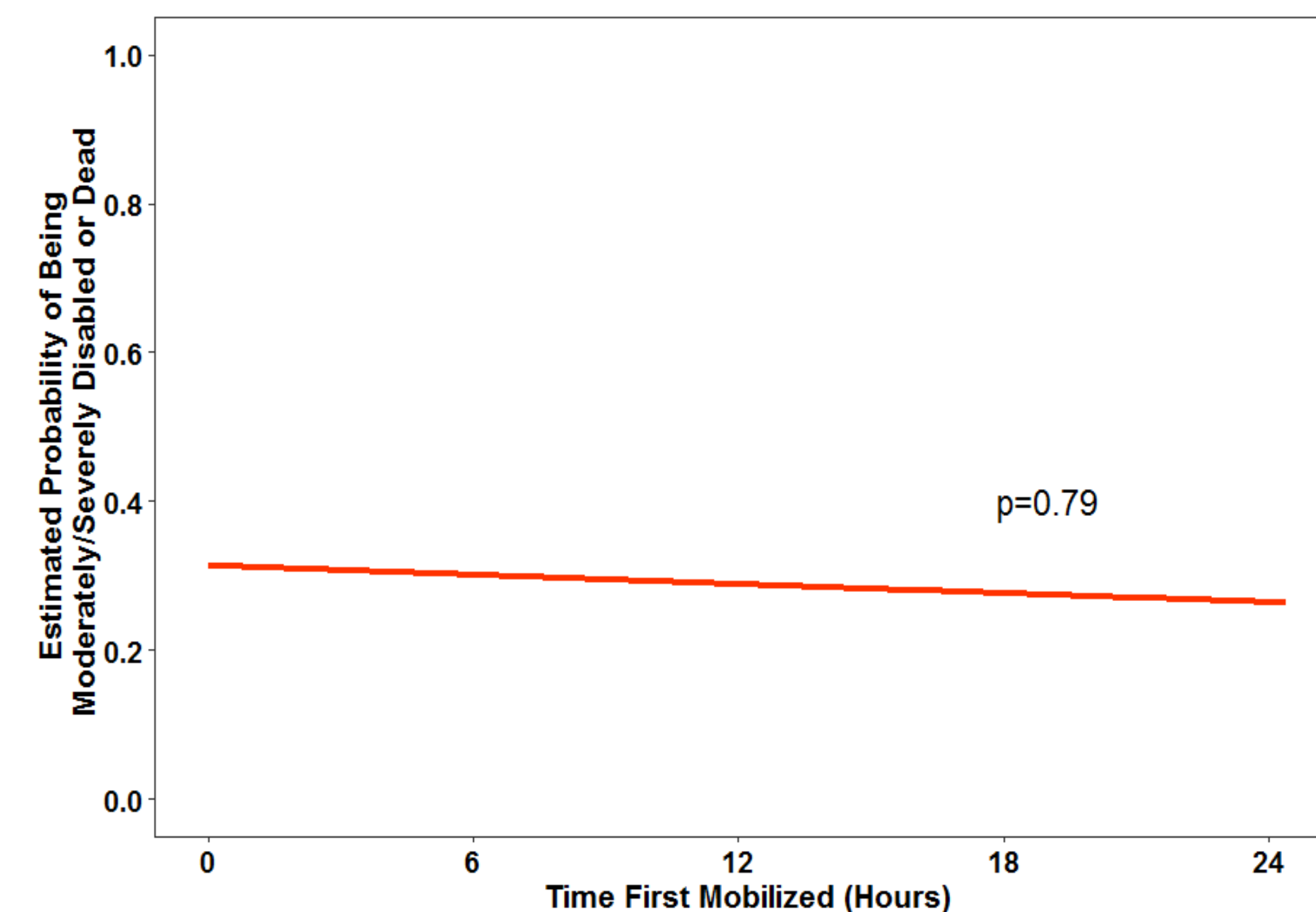
Of 147 patients mobilized within 24 hours, 91 patients were included in the analysis. (Table)

- Median NIHSS on admission was 16 [interquartile range (IQR): 11, 21]
- 85.7% (n=78) had a post-treatment TICI score of 2b or greater.
- Median time first mobilized was 14.1 hours [IQR: 9.4, 19.1].
- Ordinal regression showed no evidence that earlier mobilization had an effect on patient outcomes at 90 days. Patients were neither worse nor better by time-first-mobilized within the first 24 hours (p=0.79). (Figure)

Table. Patient Characteristics

	% (n)
Female	50.5 (46)
Mean age (SD)	68.7 (13.9)
Median NIHSS at admit [IQR]	16.0 [11.0, 21.0]
Post Treatment TICI Grade	
Less than 2b	14.4 (13)
2b or greater	85.7 (78)
Pre-Onset Modified Rankin	
No symptoms / no disability	73.6 (67)
Any disability	26.4 (24)
90-Day Modified Rankin	
No symptoms / no significant disability	26.4 (24)
Slight / moderate disability	37.4 (34)
Severe disability / expired	36.3 (33)

Figure. Probability of being moderately /severely disabled or dead at 90 days by time first mobilized



Conclusions

Ischemic stroke patients receiving thrombectomy were mobilized within 24 hours of groin puncture by the early mobility protocol.

This study showed that early mobilization had no impact on patient outcomes at 90 days by time first mobilized. This result may have been limited by small sample size.

References

1. Clark, D, et al Very early mobilization after IV alteplase does not worsen patient outcomes at 90 days. Poster presented at International Stroke Conference, Jan 2018, Los Angeles, CA.
2. Powers, W, et al. *Stroke*. 2018 Guidelines for management of acute ischemic stroke.