

## **Early Mobilization Following Recombinant Tissue Plasminogen Activator Administration and/or Mechanical Thrombectomy Reduces Length of Stay**

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**Abstracts will be considered for both poster and platform presentations**

### **Stroke/Neurovascular**

Background: Nearly 800,000 strokes occur each year in the United States and are a leading cause of disability. They result in an annual financial burden of roughly \$34 billion, which includes hospitalization and rehabilitation thereafter. Despite this cost, data regarding appropriate timing of mobilization following administration of intravenous recombinant tissue plasminogen activator (rt-PA) is lacking. As value-based payment models drive systems to reduce length of stay (LOS) and cost of care, early mobilization following rt-PA provides a means to achieve those ends in addition to potentially improving outcomes.

Methods: We conducted a retrospective case-control study including all acute ischemic stroke (AIS) patients admitted to a tertiary academic hospital stroke service from November 2017 to July 2018 who received IV rt-PA locally or by drip and ship, and/or underwent mechanical thrombectomy. The control group includes AIS patients from November 2017 to April 1, 2018. Per protocol, controls (Group 1) were maintained on bedrest for 24 hours after receiving IV rt-PA. Beginning April 2, 2018, a total of 88 (Group 2) patients were managed with early mobility protocols stratifying patients for early mobilization based on NIHSS score, presence of severe aphasia, whether they underwent thrombectomy, and their clinical stability.

Results: Among Group 1 (n=109), the mean time from rt-PA bolus to PT/OT assessment was 38 hours 55 minutes, and the average LOS was six days. With delays removed (PT/OT unable to assess due to intubation/sedation), mean time from bolus to assessment was 33 hours 25 minutes (n=101) and average LOS was five days. Following implementation of early mobility protocols in Group 2 (n=81 treated with IV rt-PA), patients had a mean time from bolus to PT/OT assessment of 22 hours 29 minutes, with an average LOS of 4.42 days. With delays removed, mean time from bolus to assessment was 18 hours 10 minutes, with an average LOS of 3.66 days. No adverse events were seen related to early mobilization in Group 2.

Conclusions: These data suggest that early mobilization following IV thrombolysis is safe and results in decreased time to PT/OT evaluation with subsequent reduction in length of stay. Further study is needed to evaluate for potential impacts on outcome.