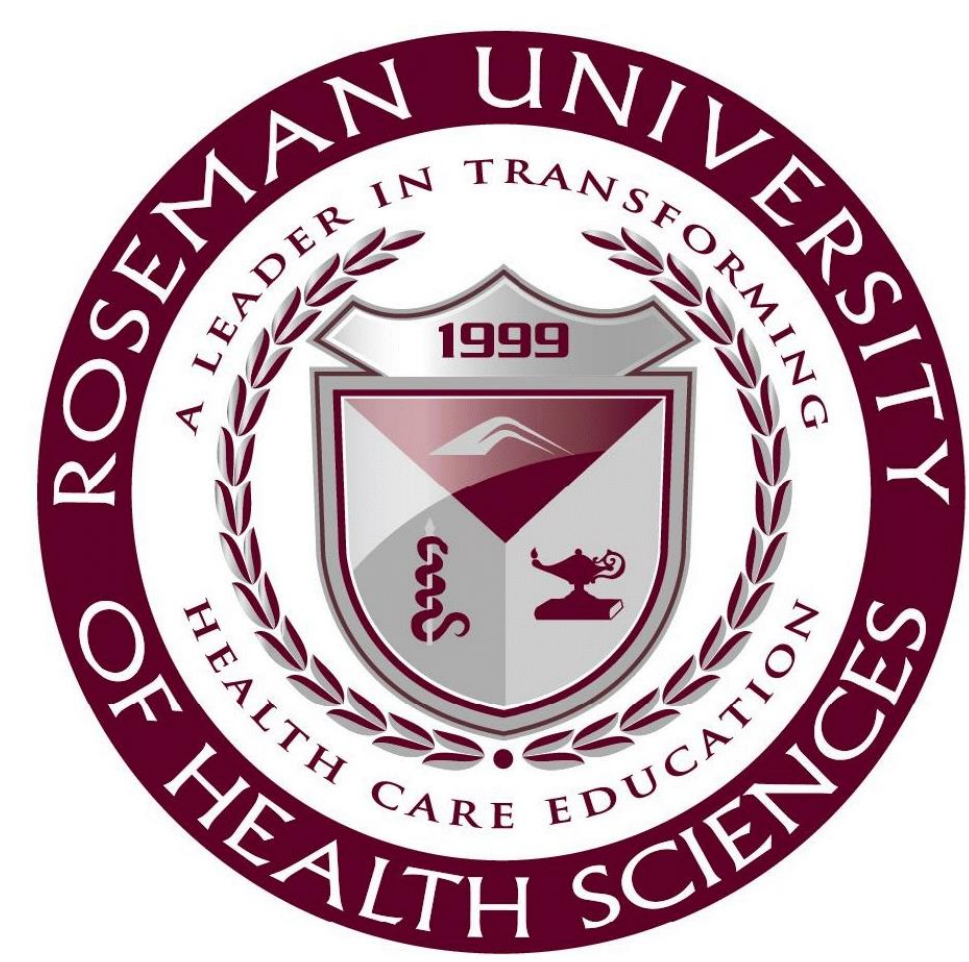


Intravenous (IV) bolus versus IV infusion as initial approach for blood pressure (BP) in acute ischemic stroke (AIS) patients receiving tissue-plasminogen activator (tPA)

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BACKGROUND

- Patients presenting with acute ischemic stroke in the emergency department often require management with antihypertensive agents
- According to the most recent update of the 2018 AHA/AIS guidelines for early management of acute ischemic stroke, blood pressure should be maintained at < 180/105 mmHg for the first 24 hours following alteplase therapy
- There is limited data to support one antihypertensive lowering strategy over another. Given this there might be a difference when comparing IV bolus versus IV infusion medications. The rationale is that the treatment options expressed in the guidelines have different durations of action which might impact their blood pressure lowering capabilities
- Furthermore, the amount of nursing needed for titrating infusions or administering boluses may be an additional motivating factor to prefer one approach over another

OBJECTIVES

- The primary objective of this study is to investigate whether there is a difference between an IV bolus or IV infusion approach in achieving Systolic Blood Pressure < 180/105 mmHg within 1 hour and maintaining blood pressure goal up to 4 hours post initial blood pressure medication administration
- The primary safety outcome of this trial is evidence of hemorrhage within 24 hours following TPA administration

METHODS

- Retrospective review study of approximately 200 patients
- Data will be extracted from the electronic medical record of patients admitted to Valley Hospital Medical Center between January 2015 and September 2020 who received one dose of tPA for the treatment of acute ischemic stroke
- Inclusion Criteria
 - > 18 years of age
 - Diagnosis of AIS requiring tPA administration
 - Received either IV bolus or IV infusion of antihypertensive for BP control within 4 hours of tPA administration
 - Have at least one recorded blood pressure within 4 hours after initial administration of antihypertensive agent
- Exclusion Criteria
 - Contraindications to tPA
 - Did not require antihypertensive agent for blood pressure control within 4 hours of tPA administration
- The following data will be collected:
 - Age
 - Ethnicity
 - Gender
 - Blood pressure on admission
 - Heart rate on admission
 - NIH stroke scale on admission
 - External fill history of antiplatelets and/or anticoagulants
 - History of previous stroke
 - Diagnosis of hypertension
 - Use of antihypertensives in the home medication list

DISCUSSION

- Chi-squared or Fisher's exact test will be performed for analyze of achievement of target blood pressure and other categorical data
- Paired t-test or a Wilcoxin signed rank test will be performed to analyze continuous data
- Research findings may be incorporated to make improvements to hospital stroke protocols and provide education to healthcare providers
- Chi-squared or Fisher's exact test will be performed for analyze of achievement of target blood pressure and other categorical data

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DISCLOSURE

- Authors of this presentation have the following to disclose concerning possible financial or personal relationships with commercial entities that may have a direct or indirect interest in the subject matter of this presentation:
 - Alexander Bonca: Nothing to disclose
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