Nursing Guidelines of Care for the tPA Ischemic Stroke Patient

Inclusion Criteria: All patients with the dx of stroke w/ physician order for tPA therapy- initial bolus and the following 24 hours

Stroke Team

- Confirm Notification of the Rapid Response/Stroke Team
- Review IV tPA Inclusion/Exclusion Reference
- NIHSS on admission, follow-up 2 hrs post tPA administration, and 24hrs post tPA
- Door to Needle of less than 60 minutes is recommended by AHA/ASA

Supportive Care and Treatment of Acute Stroke

Assessments

- Continue Frequent Vitals and Neuro Checks per tPA Order set/ tPA administration flow sheet
- Avoid placement of central venous access, arterial punctures, foley catheter, or NG tube for first 24 hours
- Notify physician:
  - STAT for signs and symptoms of bleeding complications

Management of bleeding:

- Stop tPA (Alteplase) Infusion
- Notify Neurologist (or ordering MD) – STAT
- STAT non-contrast Head CT- “Emergency, possible bleed due to thrombolytic therapy”
- Send STAT labs: PT/INR/PTT, Platelet count, Fibrinogen, CBC, Type and Cross Match 2 units RBC’s

Vital Signs including:

- SBP ≥180 or < 110; DBP ≥105 or < 70
- Heart rate > 100 or < 50
- Temperature ≥ 100.5 F°
- O2 sats < 90% on room air or RR > 24

- Goal for blood glucose is <180mg/dL

VTE Prevention: High risk for DVT formation; anticoagulation CONTRAINDICATED d/t high risk of bleeding within 24 hrs of treatment w/ IV tPA

- Complete Daily VTE Assessment
- SCDs unless contraindicated

Activity/Safety

- Nursing Swallow Screen prior to first po intake, including medications.
  - If Failed: Keep NPO, notify MD and SLP for swallowing evaluation. If Passed: Implement diet order.
- Bed rest for 24hrs, HOB 30° or greater, & turn and position at least every 2 hours while in bed if unable to move self

Nursing Screens (nursing-initiated consults that do not require a physician order)

- Case management/Discharge Planner
- Physical Therapy
- Occupational Therapy
- Speech/SLP if Nurse Swallow Screen failed, Speech Impaired or has Cognitive Deficits
- Dietician if new diagnosis of DM, Hgb A1C > 9, or BMI > 30

Patient/Caregiver Stroke Education

- Provide and Review Stroke Education Packet and Document Teaching under ‘patient education’ tab
- Stroke Education Packet should include all of the below:
  - Personalized Risk Factor Modification (Smoking Cessation, DM, HTN, Cholesterol, Sleep Apnea, Obesity)
  - Warning Signs and Symptoms of stroke (FAST)
  - How to call EMS
  - Medication Instructions/Compliance
  - Follow-up Appointment with Physician

Implemented By ____________________________ , RN  Date/Time ____________________________
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Nursing Information Only

- NIHSS (National Institute of Health Stroke Scale) is a noninvasive and valid assessment tool used to evaluate neurological status- reliable predictor of infarct size, location, and stroke severity/disability
  - 0= No Stroke/No Deficits
  - 1-4= Minor Stroke/Mild Deficits
  - 5-15= Moderate Stroke/Moderate Deficits
  - 15-20= Moderate/Severe Stroke/Major Deficits
  - 21-42= Severe/Devastating Stroke/Major Deficits
- It is reasonable to administer BP medications to keep SBP < 180mmHg and DBP < 105mmHg during and following tPA administration.
- Controlled and individualized BP management may be best achieved with IV antihypertensive medications.
- Rapid lowering of BP in ischemic stroke patients may cause hypo-perfusion and result in poor patient outcomes.
- Hyperthermia in stroke patients may damage penumbra and increase brain damage.
- Sources for elevated temperature should be identified & treated. Administer antipyretic (ex. Tylenol) as ordered to prevent hyperthermia.
- It is recommended that O2 @ 2-4L/NC should be administered to maintain O2 sats > 94% but a physician order for O2 therapy is required. O2 is NOT recommended for non-hypoxic patients with acute ischemic stroke.
- Persistent hyperglycemia (>200 mg/dL) in the first 24 hours of acute stroke has been shown to result in worse patient outcomes than those with normoglycemia. Goal for blood glucose is < 180mg/dL.
- If glycemic order set is implemented, monitor closely to prevent hypoglycemia (< 60mg/dL).
- HOB elevation is recommended for patients at risk for ICP, aspiration pneumonia and angioedema.
- Majority of stroke patients will have some sort of swallowing difficulty and may be prone to aspiration pneumonia.
- Cognitive deficits may include being impulsive, unaware of safety risks, poor or short term memory problems etc.
- Monitor for fall risk. Stroke patients may be prone to being impulsive or unaware of deficits, increasing likelihood for falls.
- Follow up CT/MRI of head is recommended at 24 hrs after tPA before starting anticoagulants or antiplatelet therapy.

Additional Stroke Resources:
- Stroke Resource Center on Nurses Portal
- RSFH Ischemic Stroke Algorithm with Roper/MUSC Transfer Agreement in Medical Records
- AHA/ASA Guideline: Guidelines for the Early Management of Patients with Acute Ischemic Stroke [http://stroke.ahajournals.org/content/early/2013/01/31/STR.0b013e318284056a.abstract](http://stroke.ahajournals.org/content/early/2013/01/31/STR.0b013e318284056a.abstract)
- American Association of Neuroscience Nurses (AANN) Clinical Practice Guidelines [www.aann.org](http://www.aann.org)
- Guide to the Care of the Hospitalized Patient with Ischemic Stroke
- American Heart/American Stroke Association [www.heart.org](http://www.heart.org)
- Free NIHSS Certification [www.ems4stroke.com](http://www.ems4stroke.com)

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Reference


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