



# Rancho Los Amigos National Rehabilitation Center

## DEPARTMENT OF NURSING

### INTENSIVE CARE UNIT

### POLICY AND PROCEDURE

**SUBJECT: THROMBOLYTIC THERAPY FOR ACUTE ISCHEMIC STROKE**

**Policy No.: ICU010**

**Supersedes: June 2018**  
**Revised Date: May 2022**  
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**Purpose of Procedure:** To outline the role of nursing in the management of individuals receiving alteplase for acute ischemic stroke.

**Physician's Order Required:** Yes

**Performed by:** Physician or Trained ICU RN

**POLICY:**

**I. INDICATION**

- a. Acute Ischemic Stroke

**II. CONTRAINDICATIONS**

- a. Active internal bleeding
- b. Recent intracranial hemorrhage (intracerebral hemorrhage, subarachnoid hemorrhage)
- c. Recent intracranial or intra-spinal surgery or serious head trauma
- d. Other intracranial conditions that may increase the risk of bleeding
- e. Bleeding diathesis
- f. Severe hypertension (>185/110 mmHg) with inadequate response to antihypertensive medications

**PROCEDURE:**

**III. Prior to Infusion**

- a. Review order
  - i. Alteplase Dosing
    - 1. The recommended total treatment dose is 0.9mg/kg (not to exceed 90mg)
    - 2. Follow manufacturer's instructions for reconstitution
    - 3. 10% of total dose will be given IVP over 1 minute
    - 4. 90% of total dose will be administered as an infusion over 1 hour
    - 5. Only the dose specified on the medication label will be administered as indicated by pharmacy
- b. Informed consent
  - i. Verbal consent is appropriate if given within 3 hours from last known well time
  - ii. Written consent is needed if given between 3 – 4.5 hours from last known well time
- c. Baseline assessment
  - i. Vital signs
  - ii. Level of consciousness
  - iii. Extremity movement
  - iv. Pupil size and response to light

**EFFECTIVE DATE:**

**APPROVED BY:** Practice Council

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- v. Presence/absence of facial droop, arm and leg weakness, sensory loss of extremities, speech difficulty since stroke onset
      - vi. Peripheral circulation (Pulses, skin temperature and color)
      - vii. Appearance of lips, tongue, and mouth
    - d. Consider the insertion of foley catheter placement
    - e. Diphenhydramine and Hydrocortisone will be made available to treat allergic reaction if necessary
    - f. The eight rights of medication administration will be observed when administering the medication:
      - i. Medication
      - ii. Dose
      - iii. Patient
      - iv. Route
      - v. Time
      - vi. Documentation
      - vii. Reason
      - viii. Response
    - g. Independent double check will be completed by 2 RNs or RN and MD or pharmacist to verify:
      - i. Medication
      - ii. Dose
      - iii. IV pump settings
      - iv. If any discrepancies are noted, clarification must be done prior to administering the medication
- IV. During Infusion – Monitor every 15 minutes
  - a. Vital signs
  - b. Neurological Assessment (LOC, extremity movement, pupils)
  - c. Peripheral circulation
  - d. Signs of bleeding
    - i. Bruising, petechiae, or hematoma
    - ii. Monitor each void and stool
  - e. Assess for signs of drug reaction or anaphylaxis:
    - i. New rash
    - ii. Itching
    - iii. Difficulty breathing
    - iv. Swelling of lips, tongue, or pharynx
  - f. Stop infusion and notify physician if patient develops
    - i. Severe headache
    - ii. Acute hypertension
    - iii. Nausea/vomiting
    - iv. Deteriorating neurological examination
- V. After Infusion
  - a. Patient will be 1:1 x 24 hours in the ICU
  - b. Hang a 50mL NS bag and set at the same rate to ensure complete dose of alteplase is administered
  - c. Vital Signs
    - i. Every 15 minutes for 2 hours, then
    - ii. Every 30 minutes for 6 hours, then
    - iii. Every hour for 16 hours
  - d. Perform neurological assessment (LOC, extremity movement, pupils)
    - i. Every 15 minutes for 2 hours, then
    - ii. Every 1 hour for 6 hours, then
    - iii. Every 2 hours for 16 hours
  - e. Assess the following a minimum of every hour:
    - i. Peripheral circulation

- ii. Look for signs of bleeding
        - 1. Bruising, petechiae, or hematoma
        - 2. Monitor each void and stool
    - f. Assess for signs of drug reaction or anaphylaxis:
      - i. New rash
      - ii. Itching
      - iii. Difficulty breathing
      - iv. Swelling of lips, tongue, or pharynx
    - g. Monitor the following as ordered per MD:
      - i. PT time, INR, aPTT,
      - ii. Xa level
      - iii. Hemoglobin, hematocrit, platelet count
      - iv. Fibrinogen
- VI. National Institute of Health Stroke Scale (NIHSS) will be assessed by provider and/or RN upon admission to the ICU and every shift.
- VII. Reportable Conditions:
  - a. Notify the physician for:
    - i. Signs/symptoms of allergic reaction
    - ii. SBP >180
    - iii. DBP >105
    - iv. Deteriorating Neuro Status
    - v. Hemodynamic Instability
    - vi. Changes in peripheral circulation
    - vii. Lab values abnormalities
    - viii. Headache
    - ix. Nausea or vomiting
    - x. Signs of bleeding
    - xi. Oropharyngeal or lingual edema
- VIII. POSSIBLE COMPLICATIONS
  - a. Intracranial hemorrhage (ICH)
  - b. Bleeding
  - c. Orolingual angioedema
  - d. Cholesterol embolization
  - e. Allergic reaction
- IX. PATIENT/FAMILY EDUCATION
  - a. Instruct patient/family regarding:
    - i. Purpose of the medication: to dissolve blood clot, restore brain blood flow, and reduce disability due to stroke
    - ii. Notification of RN immediately for:
      - 1. Change in neurological status
      - 2. Evidence of allergic reaction, including rash, swelling of lips, tongue, or mouth, difficulty breathing
      - 3. New headache, dizziness, nausea, or vomiting
- X. DOCUMENTATION:
  - a. Document in accordance with documentation standards.
  - b. Document vitals and assessments in the medical record as specified above.
- XI. ADDITIONAL PROTOCOLS:
  - a. Rancho Code Stroke Protocol
  - b. DHS Expected Practice Thrombolytic Therapy for Stroke
  - c. DHS Expected Practice Management of Acute Hemorrhage (ICH)

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References:

Powers, W. J., Rabinstein, A., Ackerson, T., Adeoye, O. M., Banbakidis, N. C., Becker, K., . . . Summers, D. V. (2019, October 30). Guidelines for the early management of patients with acute ischemic stroke: 2019 update to the 2018 guidelines for the early management of acute ischemic stroke: A guidelines for healthcare professionals from the American Heart Association. *Stroke*, 50(12).

Demaerschal et al. Scientific Rationale for the Inclusion and Exclusion Criteria for Intravenous Alteplase in Acute Ischemic Stroke A Statement for Healthcare Professionals from the American Heart Association/American Stroke Association. *Stroke*. 2016; 47:581-641.

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