Stroke Alert

Call the Neuro-ICU charge nurse at 85490
Make sure the patient has ≥20g PIV in arm, or Power CVC/Power PICC
TIME IS OF THE ESSENCE!!!

Inpatient Stroke Alert goals:
1. Physician assessment within 15 minutes
2. Stroke Labs within 10 minutes
3. Stroke Protocol CT within 25 minutes
4. Imaging and lab results communicated within 45 minutes
5. IV t-PA within 60 minutes (if applicable)

Criteria:
1. New symptoms or less than 8 hours since last witnessed normal
2. Numbness, weakness, or complete paralysis of the face, arm, and/or leg, especially on one side of the body.
3. Difficulty speaking or understanding simple sentences.
4. Decreased vision, double vision, or transient blindness in one eye.
5. Unexplained dizziness, loss of balance, or sudden falls.
6. Severe thunderclap headache with no known cause or suspected to be due to ICH or AIS.

The following diagnostic testing should be anticipated:
1. STAT finger stick blood sugar
2. STAT oxygen (O2) saturation
3. STAT laboratory tests: Listed as “Stroke Alert Panel” in Epic
4. Complete blood count (CBC)
5. Basic metabolic panel (BMP).
6. Coags: PTT and PT/INR
7. Troponin
8. beta-HCG (if appropriate)
9. STAT Stroke CT Protocol
10. Non-contrast head CT
11. Brain CT perfusion (CTP)
12. Head and neck CT angiogram (CTA)
13. STAT 12-lead EKG

General Management Considerations
1. Supplemental O2
2. NPO
3. Avoid glucose containing infusions
4. Allow blood pressure autoregulation but avoid hypotension (SBP <90 or MAP < 65) and treat SBP >220 or DBP>120 (See below for BP goals if t-PA is planned) May need lower goals in setting of aortic dissection, aneurysm, carotid surgery, pre-eclampsia, acute MI, CHF, hypertensive urgency, or concern for intracranial hemorrhage or elevated ICP
5. Goal normothermia
6. Goal normoglycemia

Thrombolytic Therapy for Acute Ischemic Stroke (AIS).

Indications for use: AIS within 4.5 hours of symptom onset or when last known to be without stroke symptoms. The decision to treat AIS should be made together by the Stroke Team and the
Emergency Department team or, in the case of an inpatient with AIS, the primary admitting team. If the patient is not a candidate for IV t-PA, consider neurointerventional radiology consult for IA t-PA.

**Absolute and relative contraindications to IV t-PA**

1. Hemorrhagic stroke.
2. Onset of stroke symptoms (or last known to be without stroke symptoms) more than 4.5 hours prior to initiation of therapy.
3. Rapidly improving neurological deficit(s).
4. Early changes of major infarction on CT.
5. Major surgery within last 14 days – may consider IA treatment.
6. Recent transmural myocardial infarction – may consider IA treatment.
7. Gastrointestinal or urinary tract bleeding within the prior 21 days – may consider IA treatment.
8. INR greater than 1.7.
9. Use of heparin within last 48 hour and prolonged PTT.
10. Platelet count less than 100×10^9/L.
11. Uncontrolled HTN with SBP greater than 185 mm Hg or DBP greater than 110 mm Hg after antihypertensive medication administration.
12. Seizure with Todd paralysis.
14. History of previous stroke within the past 3 months.

**Administration.** Utilize Epic order set: “IP NEU ISCHEMIC STROKE: ALTEPLASE (T-PA) ADMINISTRATION.” The Stroke Team will order IV t-PA. The total t-PA dose is 0.9 mg/Kg (actual body weight, up to a maximum of 90 mg). Ten percent of the total dose will be administered by IV push and the remainder over 60 minutes.

**Patient care considerations post thrombolytic therapy:**

1. **Monitoring:**
   a. **Side effects: bleeding.**
   b. **Signs of allergic reaction:** hypotension, tachycardia, angioedema, stridor, bronchospasm, and/or rash.
   c. **Blood pressure goals:**
      i. Systolic blood pressure (SBP) remains less than or equal to 185 mm Hg prior to administering.
      ii. SBP should be maintained less than 180 mm Hg during and after administration and may require use of anti-hypertensive medications (see t-PA preprinted order set).
   d. **Vital signs and neurological checks** will be performed as follows:
      i. every 15 min for 2 hours and then
      ii. every 30 min for 6 hours and then
      iii. every hour for 16 hours.

2. **Limit arterial, venous, muscular, and subcutaneous punctures.** If possible, avoid discontinuing peripheral IV or arterial access during infusion and for twenty-four hours after therapy completed. If possible, avoid NG or ET tube placement once thrombolytic therapy has been initiated.

3. **Precautions:** If during or after administration of t-PA the patient exhibits any acute change in mental or neurological status (including but not limited to unresponsiveness, pupillary changes, headache, or seizure), stop the infusion immediately and notify the M.D. on call. Prepare for emergent head CT.