Clinical Practice Guideline for Suspected Stroke: Imaging
Scottish Rite and Egleston Only

10/14/21

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**GOALS:**
- Time from Stroke Alert to Imaging Start: ≤45 mins
  - Consult Neurology to discuss plan-of-care
  - No need for stroke alert

**Initial Provider Assessment**

- Assess & document time of patient’s last known normal
- History/Risk factors
- Physical assessment (reference NIH Stroke scale)
- Assess MRI eligibility
- Safety (i.e. pacemaker, VAD, metal implants, dental hardware, etc.)
- Assess need for sedation for imaging

**Emergency Stroke Alert Call**

**GOAL OF STROKE ALERT CALL:** DETERMINE IMAGING PLAN

- Patient’s Attending calls Transfer Center with Stroke Alert
- Transfer Center conferences in (in this order):
  - Neurology Resident to assess Imaging Plan
  - Neurosurgery
  - Radiologist On Call (7a)
  - CT Team Lead
  - CT Technologist
  - MRI Technologist (7a)

**STROKE ALERT TIER I**

**STROKE ALERT TIER II**

**ACTIVATE STROKE ALERT BY CALLING 5-7778**

**STROKE ALERT CALL TIER I**

- Patient’s Attending calls Transfer Center with Stroke Alert
- Transfer Center conferences in (in this order):
  - Neurology Resident to assess Imaging Plan
  - Neurosurgery
  - Radiologist On Call (7a)
  - CT Team Lead
  - CT Technologist
  - MRI Technologist (7a)

**INTERVENTIONS**

- Manage ABCs
- Cardiac Respiratory Monitoring
- Neuro checks w/sat & vital signs q30 min
- SpO2 PRN to maintain SpO2 ≥93%
- NPO
- Place 20g IV in AC
- Treat Hypoglycemia

**RISK FACTORS**

- Sickle Cell Disease
- Congenital Heart Disease
- Previous Stroke
- NOTE: Lack of risk factors does NOT exclude patients from following this Guideline

**IMAGING GUIDANCE**

**PREFERRED (if immediately available):**
- MRI Brain (Acute Stroke Protocol)

**Contraindications for MRI:**
- Patient requires intubation and/or sedation
- Patient does not pass MRI Safety Screening

**ALTERNATE (if MRI contraindicated or Unavailable):**
- Order CT Head w/o contrast + CTA Head and CTA Neck.

**ACUTE ISCHEMIC STROKE**

- Alert Hematology
- Alert Neurology
- Alert Cardionuclear Medicine
- CT Scan Head w/o contrast
- CTA Head + CTA Neck

**HEMORRHAGIC STROKE**

- Alert Hematology
- Alert Neurosurgery
- Alert Cardionuclear Medicine
- CT Scan Head w/o contrast
- CTA Head + CTA Neck

**NEGATIVE FOR STROKE**

- Consider common Stroke mimics:
  - Migraine
  - Focal seizure with Todd’s paralysis
  - Meningitis
  - Encephalitis
  - Demyelinating disorder
  - Brain tumor

Further developed through the efforts of Children’s Healthcare of Atlanta and physicians on Children’s medical staff in the interest of advancing pediatric healthcare. This pathway is a general guideline and does not represent a professional care standard governing providers’ obligation to patients. Ultimately the patient’s physician must determine the most appropriate care. © 2021 Children’s Healthcare of Atlanta, Inc.
<table>
<thead>
<tr>
<th>Exclusion Criteria for tPA therapy - patient must have NO answered for ALL criteria, if ANY Question is &quot;YES&quot;, further assessment is required before tPA.</th>
<th>Yes</th>
<th>No</th>
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<tbody>
<tr>
<td>Patient received IV tPA at referring hospital</td>
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<tr>
<td>Intracranial hemorrhage of any type seen on neuroimaging (including parachymal, subarachnoid, other)</td>
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<td>Clinical presentation suggestive of subarachnoid hemorrhage or aortic arch dissection</td>
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<td>Neuroimaging supports multilobar involvement or large volume infarct involving &gt;1/3 of a complete arterial territory</td>
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<td>Head trauma, intracranial or spinal surgery, or prior stroke in the previous 3 months</td>
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<tr>
<td>History of previous intracranial hemorrhage, cerebral AVM, aneurysm, neoplasm, or dissection</td>
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<tr>
<td>Previous diagnosis of vasculitis of the CNS. <em>Focal cerebral arteriopathy of childhood (FCA) is NOT a contraindication.</em></td>
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<td>Persistent systolic blood pressure &gt;15% over the 95th percentile ?1hr and unresponsive to treatment; OR systolic BP ?20% over the 95th percentile at any time</td>
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<td>Myocardial infarction in the previous 3 months. Clinical presentation consistent with acute MI or post-MI pericarditis that requires evaluation by cardiology prior to treatment.</td>
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<td>Evidence of active bleeding or acute trauma (fracture) on examination</td>
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<td>Internal bleeding, GI, or urinary tract hemorrhage in the previous 21 days</td>
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<td>Major surgery, major trauma not involving the head, or parenchymal biopsy in the previous 14 days</td>
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<td>Arterial puncture at a noncompressible site or lumbar puncture in the previous 7 days (<em>Patients who have had a cardiac catheterization via a compressible artery are NOT excluded</em>)</td>
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<td>Known current malignancy and/or within 1 month of completion of treatment for cancer</td>
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<td>Pregnant</td>
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<td>Stroke associated with any of the following: intracranial arterial dissection; endocarditis; moyamoya; sickle cell disease; CNS vasculitis; meningitis; bone marrow, air, or fat embolism</td>
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<tr>
<td><strong>Anticoagulation Issues:</strong></td>
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<td>- Platelets &lt;100,000</td>
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<td>- INR &gt;1.4, PT &gt;15s, or aPTT &gt;38s</td>
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<td>- Current anticoagulation use (warfarin or heparin) and abnormal INR &gt;1.4, PT &lt;15s, aPTT &gt;38s</td>
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<td>- Full treatment LMWH within last 24h (does not include prophylactic dose)</td>
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<td>- Current use of direct thrombin or direct xa inhibitors within the last 48h (Rivaroxaban, Apixaban, Dabigatran, Argatroban, Bivalirudin)</td>
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<td>- Bleeding diathesis</td>
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<td>Blood Glucose concentration is &lt; 50mg/dl or &gt;400mg/dL (<em>ok if it can be corrected and exam reassessment unchanged</em>)</td>
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<td>Allergy to tPA</td>
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<td>Patient will refuse blood transfusion if indicated</td>
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<tr>
<td>Patient and family refuse to sign consent based on known risks and benefits of treatment of stroke with IV tPA</td>
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**Eligibility Determined**

Patient must have NO answered for ALL criteria, if ANY Question is "YES", tPA is contraindicated UNTIL further assessment is completed.