



Protocol Inclusion Ages

Ages 2-17. Also including age 18 with medical complexity and followed by pediatrics subspecialty service.

± Inclusion Stroke Symptoms: Acute unilateral weakness

± Additional Stroke Symptoms: Unilateral numbness, speech/language difficulty, speech, loss of vision/double vision, loss of balance/coordination, new focal seizure

Alteplase Exclusion Criteria

- Unknown time of onset
- Pregnancy
- Rapidly improving neuro status (relative)
- Clinical presentation of subarachnoid hemorrhage
- Parent unwilling to allow blood transfusion
- Underlying significant bleeding disorder
- History prior ICH
- Known cerebral AVM, aneurysm, neoplasm
- Persistent hypertension >15% above 95th percentile
- Plts <100K, PT>15 (INR>1.4), elevated PTT
- Clinical presentation of MI or post-MI myocarditis
- Prior stroke, major head trauma, or intracranial surgery in last 3 months
- Major surgery or parenchymal biopsy within 10 days (relative)
- GI or urinary bleeding within 21 days (relative)

Rapid MRI/A Sequences* Localizer, Ax DWI, Ax T2 FLAIR, Ax GRE, 3D MRA TOF (Brain) 2D MRA TOF (Neck) (**Write Hyperacute PEDS STROKE PROTOCOL in Reason for Exam**)

Pediatric Stroke Page Recipients Who Do Not Routinely Respond † NSICU team, Trauma clerk

- Noncompressible arterial puncture or LP within 7 days (relative)
- Malignancy or within 1 month of completing cancer treatment
- Large territory infarct (>1/3 MCA territory)
- Suspected bacterial endocarditis
- Sickle cell disease
- Moyamoya
- Meningitis
- Bone marrow, air or fat embolism
- Previous diagnosis of primary CNS angiitis or secondary CNS vasculitis
- Intracranial hemorrhage on baseline imaging
- Intracranial dissection
- Known allergy to t-PA

Anticoagulation

- On coumadin must have INR < 1.4
- On UFH must have normal PTT
- On LMWH in last 24hrs

Alteplase Eligibility Criteria**

- Age 2-17, < 4.5 hours from symptom onset
- Confirmed arterial ischemic stroke on imaging (MRI/A, CTA)
- Parental consent all ages
- Research consent for alteplase ages 2-12**
- No exclusions (see addendum)

Neuroprotective Care

- NPO, head of bed flat, midline
- Normotension: Goal of SBP between 50th and 15% above 95th percentile
- Normovolemia: NS at maintenance
- Oxygenation: SpO2 > 95%
- Normothermia: treat all T > 38 with acetaminophen +/- cooling
- Euglycemia: Ideally 70-120, no glucose to IV unless hypoglycemic, treat glucose >200
- Seizure control: AED (Keppra) for suspected seizure activity
- If no alteplase given, then check vital signs q1 hr
- If alteplase given, then check vital signs q15 mins x2 hrs, q30 mins x6 hrs and q1 hr for 16 hrs. (see Pediatric Guideline Attachment E)
- Avoid benzodiazepines

Stroke Laboratory/Test Evaluation

- STAT LABS (POC Glucose, CBC, Diff, Chem 7, Mg, Phos, Ca, IStat, PT/INR, PTT, D-dimer) UTox, heg (if appropriate)
- EKG

IA Thrombectomy Guidelines***

- Large Vessel Occlusion: ICA, MCA, M1, Basilar
- Age ≥ 5 y, ≥ 20kg, NIHSS ≥ 6
- <24 hours from symptom onset
- ASPECT score for CT 6-10
- Parental consent
- Final determination by Neuroendovascular attending (see Neurosurgery call list in amion)