Children's Mercy
KANSAS CITY
125 Years and Growing

Contraindications to Alteplase IV for Acute Stroke in Childhood

History	• Patient last seen well more than 4.5 hours previously • Patients in whom time of symptom onset is unknown • Prior stroke, major head trauma or intracranial surgery within the last 3 months • History of prior intracranial hemorrhage, known AVM, or aneurysm • Major surgery or parenchymal biopsy within 10 days • GI or GU bleeding within 21 days • Patient with neoplasm/malignancy or within one month of completion of treatment for cancer • Patients with underlying significant bleeding disorder (Exception: Patients with mild platelet dysfunction, mild von Willebrand disease or other mild bleeding disorders are NOT excluded.) • Previously diagnosed with primary angiitis of the central nervous system or secondary arteritis
Patient factors	• Patient who would decline a blood transfusion if indicated • Clinical presentation consistent with acute myocardial infarction or post MI pericarditis that requires evaluation by cardiology before treatment • Arterial puncture at noncompressible site or lumbar puncture within last 7 days (relative contraindication). (Exception: Patients who have had cardiac cath via a compressible artery are NOT excluded.)
Etiology	• Stroke due to subacute bacterial endocarditis, sickle cell disease, meningitis, embolism (bone marrow, air or fat), or moyamoya disease.
Exam	• Peristent systolic blood pressure > 15% above the 95th percentile for age while sitting or supine • Mild deficit (PenNIHSS < 6) at start of tPA infusion • Severe deficit suggesting very larg territory stroke pre-tPA • PedNIHSS > 25, regardless of infarct volume seen on neuroimaging
Imaging	• Symptoms suggestive of subarachnoid hemorrhage even if CT or MRI of head are normal CT with hypodensity/sulcal effacement > 33% of MCA territory or ASPECTS ≤ 7 • Intracranial cervicocephalic arterial dissection

Lab data	• Glucose < 50 mg/dL (2.78 mmol/L) or 400 mg/dL (22 mmol/L) • Bleeding diathesis including Platelets < 100,000; PT > 15 sec (INR > 1.4) or elevated PTT > upper limits of the normal range

Reference:

Rivkin, M.J., Bernard, T.J., Dowling, M.M., & Amilie-Lefond, C. [2016]. Guidelines for urgent management of stroke in children. Pediatric Neurology, 26, 8-17. doi: 10.1016/j.pediatrneurol.2016.01.016

These guidelines do not establish a standard of care to be followed in every case. It is recognized that each case is different and those individuals involved in providing health care are expected to use their judgment in determining what is in the best interests of the patient based on the circumstances existing at the time. It is impossible to anticipate all possible situations that may exist and to prepare guidelines for each. Accordingly these guidelines should guide care with the understanding that departures from them may be required at times.

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