

ENDOVASCULAR STROKE PROTOCOL

Inclusion Criteria for Catheter Based (IA) Reperfusion (All of the following 7 criteria must be “Yes” to proceed with therapy)

1. Age greater than 18 years
2. Acute ischemic stroke diagnosed clinically
3. Not eligible for intravenous tPA based on the standard protocol
4. A significant neurologic deficit expected to result in long-term disability
5. Deficits consistent with large vessel occlusion (basilar, vertebral, internal carotid or middle cerebral artery M1 or M2 branches).
6. Non-contrast CT scan without hemorrhage or well-established infarct
7. Clearly documented time of onset less than 5 hours (Endovascular therapy can begin before 6 hours)

Warnings

These conditions may increase the risk of unfavorable outcomes but are not necessarily a contraindication to IA reperfusion with IA chemical and/or mechanical treatment:

Age > 80 years

Infections

Recent surgical procedures

Patients currently receiving oral anticoagulants, e.g., Warfarin sodium and sub-therapeutic INR

Increased risk of bleeding due to any of the following:

Acute pericarditis

Sub-acute bacterial endocarditis (SBE)

Pregnancy

Diabetic hemorrhagic retinopathy or other hemorrhagic ophthalmic conditions

History of brain aneurysm or vascular malformation

- may consider IA catheter-based reperfusion in patients with CNS lesions that have a very low likelihood of bleeding such as small un-ruptured aneurysms or benign tumors with low vascularity]

Exclusion Criteria for Catheter Based (IA) Reperfusion (All of the following must be “No” to proceed with therapy)

Clinical Exam

1. Rapid improvement or stroke severity too mild (NIHSS score <15 – relative contraindication)
2. Suspicion of subarachnoid hemorrhage by clinical presentation
3. Seizure at onset
 - if residual deficits are due to the postictal state rather than to ischemia If rapid diagnosis of vascular occlusion can be made, treatment may be given

Imaging

4. Intracranial hemorrhage (ICH, SAH, Subdural Hematoma, etc.)
5. Well-established acute infarct on CT/MR in the territory to be reperfused
6. Major infarction (e.g. > 1/3 cerebral hemisphere)
7. CNS lesion with high likelihood of hemorrhage s/p chemical thrombolytic agents (e.g., brain tumors, abscess)

History

2. Status post full dose IV tPA
3. Life expectancy less than 1 year or severe co-morbid illness or CMO on admission
4. Recent abdominal, intracranial or spinal surgery, head trauma, or stroke (less than 3 months)
5. Active internal bleeding (< 22 days, Including arterial puncture at non-compressible site)

Lab

6. Platelets less than 100,000,
7. PTT greater than 40 sec after heparin use, or PT greater than 15
8. INR greater than 1.7, or known bleeding diathesis
9. Glucose < 50 or > 400 mg/dl