Stroke Reperfusion Checklist

This clinical pathway is intended to supplement, rather than substitute for, professional judgment and may be changed depending upon a patient's individual needs. Failure to comply with this pathway does not represent a breach of the standard of care.

Probable Acute Ischaemic Stroke
BEGIN 17. STROKE ALGORITHM

Review/Complete Fibrinolysis Checklist

Inclusion and Exclusion Characteristics of Patients With Ischemic Stroke Who Could Be Treated With IV rtPA Within 3 Hours From Symptom Onset

Inclusion criteria

- Diagnosis of ischemic stroke causing measurable neurological deficit
- Onset of symptoms < 3 hours before beginning treatment
- Aged ≥18 years

Exclusion criteria

- Significant head trauma or prior stroke in previous 3 months
- Symptoms suggest subarachnoid haemorrhage
- Arterial puncture at non-compressible site in previous 7 days
- History of previous intracranial haemorrhage
- Intracranial neoplasm, arteriovenous malformation, or aneurysm
- Recent intracranial or intraspinal surgery
- Elevated blood pressure (systolic >185 mm Hg or diastolic >110 mm Hg)
- Active internal bleeding
- Acute bleeding diathesis, including but not limited to
  - Platelet count <100 000/mm^3
  - Heparin received within 48 hours, resulting in abnormally elevated aPTT greater than the upper limit of normal
  - Current use of anticoagulant with INR >1.7 or PT >15 seconds
- Current use of direct thrombin inhibitors or direct factor Xa inhibitors with elevated sensitive laboratory tests (such as aPTT, INR, platelet count, and ECT; TT; or appropriate factor Xa activity assays)
- Blood glucose concentration < 50 mg/dL (2.7 mmol/L)
- CT demonstrates multilobar infarction (hypo density >1/3 cerebral hemisphere)

Relative exclusion criteria

Recent experience suggests that under some circumstances—with careful consideration and weighting of risk to benefit—patients may receive fibrinolytic therapy despite 1 or more relative contraindications. Consider risk to benefit of IV rtPA administration carefully if any of these relative contraindications are present:

- Only minor or rapidly improving stroke symptoms (clearing spontaneously)
- Pregnancy
- Seizure at onset with postictal residual neurological impairments - Intravenous rtPA is reasonable in patients with a seizure at the time of onset of stroke if evidence suggests that residual impairments are secondary to stroke and not a postictal phenomenon
- Major surgery or serious trauma within previous 14 days
- Recent gastrointestinal or urinary tract haemorrhage (within previous 21 days)
- Recent acute myocardial infarction (within previous 3 months)

Additional Inclusion and Exclusion Characteristics of Patients with Acute Ischemic Stroke Who Could Be Treated With IV rTPA within 3 to 4.5 Hours From Symptom Onset

Main inclusion criteria

- Diagnosis of ischemic stroke causing measurable neurologic deficit
- Onset of symptoms within 3 to 4.5 hours before beginning treatment

Exclusion criteria

- Age > 80 years
- Baseline NIHSS score >25
- Taking oral anticoagulant regardless of INR
- History of both diabetes and prior ischemic stroke
- Those with imaging evidence of ischemic injury involving more than one third of the middle cerebral artery territory,

NOTES

- A physician with expertise in acute stroke care may modify this list.
- Onset time is defined as either the witnessed onset of symptoms or the time last known normal if symptom onset was not witnessed.
- In patients without recent use of oral anticoagulants or heparin, treatment with IV rtPA can be initiated before availability of coagulation test results but should be discontinued if INR is >1.7 or PT is abnormally elevated by local laboratory standards.
- In patients without history of thrombocytopenia, treatment with IV rtPA can be initiated before availability of platelet count but should be discontinued if platelet count is <100 000/mm^3.

- **Repeat NIH Stroke Scale**: are deficits rapidly improving to normal?
- **Patient remains candidate for fibrinolytic therapy?**

Candidate

Review risks/benefits with patient and family. If acceptable, obtain CONSENT FOR FIBRINOLYSIS

- Ensure patient is attached to monitor (ECG, SPO_2, BP) and repeat baseline vitals. Treat BP if indicated **(See 19. Hypertensive Emergencies Algorithm)**
- Set up second IV line for the fibrinolysis. Run NS/RL TKVO in other line
- **ALTEPLASE (**give **within 60 minutes** of patient arrival**)**
  - The recommended dose of alteplase is 0.9 mg/kg (maximum, 90 mg) infused over 60 minutes, with 10% of the total dose administered as an initial IV bolus over 1 minute.
- Measure blood pressure and perform neurological assessments **every 15 minutes** during and after IV rtPA infusion for **2 hours**, then **every 30 minutes** for **6 hours**, then **hourly until 24 hours** after IV rtPA treatment.
- **Admit to stroke unit**

Not a Candidate

- **Admit to stroke unit**
- Administer **aspirin 325mg PO/PR**
- In patients already taking **statins**, continue treatment
- Monitor blood glucose and temperature and treat if indicated. Maintain blood glucose between 7.7mmol/L and 10mmol/L
- Initiate supportive therapy; treat co morbidities