Interior Health

STROKE / TIA
Thrombolysis for Stroke – ADULT

Weight (kg)

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1. **ALLERGIES:** see # 826234 - Allergy and Adverse Reaction Record

2. **CODE STATUS / MOST:** Refer to Medical Orders for Scope of Treatment (MOST) # 829641

3. **DIAGNOSIS: Ischemic Stroke Last Seen Normal (LSN):** _____

   ☐ Patient is eligible for thrombolysis and potential risks and benefits have been discussed with the patient / family *(see back of page 1 for eligibility assessment)*

   - If ineligible for thrombolysis, consult neurologist re: potential for Endovascular Thrombectomy (EVT) if LSN or woke up with symptoms within past 24 hours
   - If ineligible for thrombolysis or EVT, use Stroke / TIA Admission PPO # 829443

4. **NIHSS Score** *(physician to complete; see back of page 2 for NIHSS information):* _____

5. **MEDICATIONS**
   - DO NOT GIVE PO medication until swallowing screen passed; consider NG/OG if medications required
   - DO NOT GIVE antithrombotic medications until patient cleared by neurology (neurology on-call) or internal medicine after review of CT head 24 hours post-thrombolytic administration

Thrombolytic

☐ **alteplase (tPA)** (see IH Medication Manual for dosage chart)

Total alteplase (tPA) dose: _____ mg (0.9 mg / kg), maximum dose 90 mg.
Bolus dose: alteplase (tPA): _____ mg IV push over 1 minute. Time bolus administered: _____
Continuous infusion dose: alteplase (tPA): _____ mg IV over 60 minutes.
After 60 minutes, stop infusion and disconnect from IV y-site. DO NOT infuse any remaining drug.

OR

☐ **tenecteplase (TNK)** (see IH Medication Manual for dosage chart)

tenecteplase (TNK) dose: _____ mg (0.25 mg / kg) IV push over 5-10 seconds, maximum dose 25 mg.
Consent for use of tenecteplase in acute ischemic stroke must be obtained and documented.
Time administered: _____

Blood Pressure Management

Blood pressure goals:
- Maintain Systolic less than 180 mmHg and / or Diastolic less than 105 mmHg
- For suspected or confirmed intracerebral hemorrhage (ICH): Maintain Systolic less than 140 mmHg

If BP greater than the above stated thresholds:

☐ **labetalol 10 mg IV Q10MIN PRN × 24 hours** (maximum 300 mg in 24 hours): Hold if HR less than 60 BPM

☐ **hydrALAZINE 10 mg IV Q30MIN PRN × 24 hours** (maximum 200 mg in 24 hours)
- Monitor BP and HR Q5MIN after each antihypertensive dose until stable
- Notify MRP if goal blood pressure cannot be achieved within 30 minutes of antihypertensive intervention

Date (dd / mm / yyyy)	Time	Prescriber's Signature	Printed Name or College ID#
/ /			

ELIGIBILITY ASSESSMENT

- These criteria are designed to guide clinical decision-making, however, the decision to use thrombolytic should be based on the clinical judgement of the treating physician
- For adolescents, decision to treat should be based on symptoms, age, and in consultation with neurology
- Relative benefits versus potential risks should be weighed on an individual basis
- For patients deemed ineligible for thrombolysis, consult neurologist on-call to discuss potential for endovascular thrombectomy (EVT) if LSN within 24 hours; EVT eligibility based on FAST VAN assessment and neurologist interpretation of CTA

Indications for Thrombolysis in Acute Ischemic Stroke (AIS)

- Diagnosis of ischemic stroke causing a measurable neurologic deficit in a patient who is 18 years of age or older
- Patient can be transported, assessed, CT scan performed and read, and thrombolytic treatment initiated within 4.5 hours of LSN

Absolute Contraindications

- Any source of active hemorrhage in non-compressible sites or acute hemorrhage on brain imaging
- Any condition that could increase the risk of major hemorrhage after thrombolysis (inherited bleeding disorder, liver failure)
- CT or MRI showing multi-lobar infarct impacting greater than one-third MCA territory

Relative Contraindications

- Pregnancy
- Platelet count less than 100,000 per cubic millimeter
- Clinical symptoms suggestive of subarachnoid hemorrhage
- Blood glucose less than 2.7 mmol / L or greater than 22.2 mmol / L
- Arterial puncture at a non-compressible site within the past 7 days
- Gastrointestinal or urinary tract hemorrhage within the past 21 days
- Myocardial infarction, pericarditis or aortic dissection within the past 2 months
- Major stroke, neurosurgery, serious head or spinal trauma within the past 3 months
- INR greater than 1.7, or PTT greater than normal range (aPTT greater than 37 seconds)
- Major trauma or surgery within the past 14 days (risk varies according to surgical procedure)
- Direct non-vitamin K oral anticoagulant (DOAC) within the past 48hrs (Apixaban, Dabigatran, Rivaroxaban)
- History of intracranial hemorrhage, vascular malformation, neoplasm (except meningioma), or untreated aneurysm
- Therapeutic dose of low molecular weight heparin (LMWH) within past 24 hours (this does not apply to prophylactic dosages)
- Hypertension refractory to aggressive antihypertensive treatment such that SBP less than 180 mmHg or DBP less than 105 cannot be maintained
- Stroke symptoms due to another non-ischemic acute neurological condition such as seizure with postictal Todd's paralysis or focal neurological signs due to severe hypo- or hyperglycemia

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6. MONITORING

- Vital signs and modified NIHSS (#801065) Q15MIN × 1 hour after thrombolytic bolus dose administered, then Q30MIN × 2, Q2H × 2, Q4H × 24H, then BID until discharge or transfer
- Repeat vital signs and modified NIHSS PRN with any decompensation in clinical status
- Notify MRP if modified NIHSS score increases by 1 or more points from last assessment
- Goal temperature less than 37.5 degrees Celsius
- Continuous cardiac monitoring while in the Emergency Department (ED)

☐ Cardiac monitoring for at least 24 hours; once discharged from ED, destination and type of monitoring (holter or telemetry) as per MRP

7. PATIENT CARE REMINDERS

- Avoid indwelling urinary catheter unless procedurally required for endovascular thrombectomy (EVT)
- Avoid in and out catheterization for at least one hour post-thrombolytic
- Avoid nasogastric tube insertion for at least one hour post-thrombolytic
- Avoid arterial puncture for 24 hours post-thrombolytic
- Avoid early ambulation for 24 hours post-thrombolytic; advance mobilization as otherwise outlined on the early mobilization guidelines for stroke patients in acute care (#845018)

8. HYDRATION AND NUTRITION

- Ensure two patent IV's and infuse 0.9% sodium chloride at 75 mL / hr; Saline lock once intake is greater than 1,000 mL / 24h
- NPO until swallowing screen passed; swallowing screen to be completed within 12 hours of admission
- Perform TOR-BSST (Toronto Bedside Swallow Screen Test #809252) or if no TOR-BSST certified assessor available, use IH swallowing screen protocol (#826201)

Swallowing Screen Failed

- Keep NPO
- Enter meditech order for speech language pathology (SLP); reason for referral: failed swallow screen
- In absence of SLP repeat swallow screen Q shift and PRN

Swallowing Screen Passed

- Order minced-texture diet and thin-fluid consistency, unless pre-admission diet is lower consistency or texture
- Observe 2 meals and advance diet if no difficulties observed or reported

9. DIAGNOSTICS

- Repeat head CT (non-contrast) to be performed approximately 24 hours after thrombolytic administration
- Order enter STROKE census. THIS IS FOR TRACKING PURPOSES ONLY.

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National Institutes of Health Stroke Scale (NIHSS Score)

For detailed information please see the NIHSS instructions (form #829167) on InsideNet

Item	Title	Circle Responses and Total Score at Bottom of Page
1a	Level of Consciousness	0 – alert 1 – drowsy 2 – obtunded 3 – coma / unresponsive
1b	Orientation Questions *(ask month and age)*	0 – answers both correctly 1 – answers one correctly 2 – answers neither correctly
1c	Response to Commands *(close eyes, make a fist)*	0 – performs both tasks correctly 1 – performs one task correctly 2 – performs neither
2	Gaze	0 – normal horizontal eye movements 1 – partial gaze palsy 2 – complete gaze palsy
3	Visual Fields	0 – no visual field defect 1 – partial hemianopia 2 – complete hemianopia 3 – bilateral hemianopia
4	Facial Movement	0 – normal 1 – minor facial weakness 2 – partial facial weakness 3 – complete unilateral facial palsy
5a	Left Arm Motor Function *(hold arm outstretched for 10 sec)*	0 – no drift 1 – arm drifts down but does not touch bed within 10 sec 2 – some effort against gravity 3 – no effort against gravity; limb falls 4 – no movement
5b	Right Arm Motor Function *(hold arm outstretched for 10 sec)*	0 – no drift 1 – arm drifts down but does not touch bed within 10 sec 2 – some effort against gravity 3 – no effort against gravity; limb falls 4 – no movement
6a	Left Leg Motor Function *(hold leg up for 5 sec)*	0 – no drift 1 – leg drifts down but does not touch bed within 5 sec 2 – some effort against gravity 3 – no effort against gravity; limb falls 4 – no movement
6b	Right Leg Motor Function *(hold leg up for 5 sec)*	0 – no drift 1 – leg drifts down but does not touch bed within 5 sec 2 – some effort against gravity 3 – no effort against gravity; limb falls 4 – no movement
7	Limb Ataxia *(finger-nose, heel-shin tests)*	0 – no ataxia 1 – ataxia in one limb 2 – ataxia in two limbs
8	Sensory	0 – no sensory loss 1 – mild to moderate sensory loss 2 – severe sensory loss
9	Language	0 – normal 1 – mild to moderate aphasia 2 – severe aphasia 3 – mute or global aphasia
10	Articulation	0 – normal 1 – mild to moderate dysarthria 2 – severe dysarthria
11	Extinction and Inattention (Neglect)	0 – no abnormality 1 – mild (affects one sensory modality) 2 – severe (affects 2 or more, e.g. vision and sensation)
Test Administered: Date *(dd/mm/yyyy)*:	Time:	**Total =** **/ 42**

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10. EMERGENCY MANAGEMENT OF COMPLICATIONS POST THROMBOLYSIS

Intracranial Hemorrhage: if symptoms of severe headache, acute hypertension, nausea, vomiting, or worsening neurologic exam, assume intracranial hemorrhage until proven otherwise

Orolingual Angioedema: if signs of unilateral or bilateral swelling of the face, lips and tongue, or respiratory symptoms (shortness of breath, wheeze, cough, stridor, hypoxemia), suspect orolingual angioedema until proven otherwise

If either of the above:

- Stop thrombolytic STAT if infusion running
- Notify MRP STAT
- Initiate Emergency Management of Complications Post Thrombolysis - ADULT PPO (#829593)

11. DISPOSITION

- If stable post-thrombolytic, transfer to stroke or appropriate unit so long as outlined patient monitoring expectations can be met
- Cardiac monitoring as per MRP; ensure cardiac, telemetry, or holter monitoring is prioritized for 24h following thrombolysis
- Admitting physician to complete Stroke Admission PPO #829443

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