

IV ALTEPLASE TREATMENT PROTOCOL

ALTEPLASE (tPA) CANDIDATE
 <4.5 hrs from onset
 Persistent, disabling deficit
 Age ≥ 2 yrs
 CT or MRI confirms eligibility
 No contraindications

Patient in ER or PICU with cardioresp monitoring

Treatable
BP by age?

Labetolol 0.2 mg/kg IV, push over 2-3 min
 Repeat q15 min pm
 Then go to PICU HTN guideline

Prepare and administer Alteplase
 ED main med or trauma room
 Activase 50mg vial: Add 50cc SW = 1 mg/ml
TOTAL DOSE = 0.9 mg/kg (max 60mg)
 Bolus 10% of total IV push over 5 min
 Infuse remaining via IV pump over 1hr

Angioedema:
 1. IV diphenhydramine 5 mg/kg/d div qid (max 300)
 2. IV ranitidine 2-4 mg/kg/d divided q6-8h (max 200 mg/d)
 3. IV hydrocortisone 1-5 mg/kg/d div q12-24h

Reassess:
Improved?

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Post-Treatment Care
 Remains in PICU for minimum 48 hours.
 No arterial punctures, invasive procedures or ACT (ASA, NSAID, UFH, LMWH) for 24 hours
 Neuro vital signs q15min x 2hrs, then q30min x 6hrs, then q1hr x 16 hrs
 Standard follow-up CT head in 24 hours

Neuroprotective care

Any neurological
deterioration?

Order urgent CT head
 Draw stat CBC, INR, PTT
 Prepare 6-8 units cryoprecipitate (1U/5kg) (fibrinogen and factor VIII)
 Prepare 6-8 units of platelets (1U/5kg)
 Consult neurosurgery if signs elevated ICP or CT reveals bleed or mass effect

ALTEPLASE (tPA) contraindications:

- Allergy to tPA
- >4.5 hrs from last seen well
- Rapidly improving or PedNIHSS <5
- Stroke 2^o to SBE, SCD, meningitis, marrow/fat embolism, or moyamoya
- ASPECTS ≤7
- Known ICH, AVM, aneurysm
- Persistent HTN (>95+15%ile)
- Platelets <100 X10⁹/L
- Glucose <2.8 or >22 mM
- PTT >40 sec or INR >1.4
- LMWH within 24 hrs
- Pregnancy
- Imaging evidence of blood
- Intracranial dissection
- PedNIHSS >25 ⊕
- Arterial puncture at non-compress site or lumbar puncture <7d
- Stroke or major head trauma <3mo
- Neurosurgery <90 days ⊕
- Major surgery or biopsy <10d ⊕
- Malignancy or recent cancer Tx ⊕
- GI or GU bleeding <21days ⊕

⊕ = relative contraindication

