



PEARLS IN ACUTE ISCHEMIC STROKE CARE

TIME IS BRAIN

INFARCT CORE = IRREVERSIBLE DAMAGE

PENUMBRA = SALVAGEABLE BRAIN → EARLY REPERFUSION IS THE KEY

Initial Assessment

- Rapidity of the onset of symptoms
- Last Known Well (LKW) time
- NIHSS score
- Blood pressure
- NCCT brain
- MRI-DWI to exclude stroke mimics

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BP Management

If thrombolysed

Before & during thrombolysis: Keep <185/110 mmHg
Post reperfusion: Target <180/105 mmHg during first 24 hours

If not thrombolysed

Max drop: ≤15% in 24 hrs

Agents

Labetalol IV (10–20 mg) ± infusion (2–8 mg/min)
Alternative: GTN infusion

Monitoring

In thrombolysed patients

- Vitals: Every 15 min (first 2 hrs) → every 30 min (6 hrs) → hourly (18 hrs)
- Watch for hemorrhage, edema, deterioration of GCS
- If sudden decline in GCS → Stop thrombolytic agent & repeat CT Brain

Antiplatelet after thrombolysis:

- Arrange CT after 24 hrs to exclude bleeding
- Then use single agent (Aspirin/Clopidogrel)

Immediate post stroke care

- Temperature management
- Glucose: 140–180 mg/dL
- Swallowing: Screen early, NG if unsafe.
- Complications: Look for deterioration of GCS, raised ICP, pneumonia, seizures, arrhythmias.
- Prophylaxis for DVT
- Screening for depression

Antiplatelet treatment

Minor stroke or high-risk TIA:

Loading doses of aspirin (300mg) and clopidogrel (300mg) as early as possible → dual antiplatelet therapy (aspirin 75mg and clopidogrel 75mg) for 21 days → Single antiplatelet indefinitely (Aspirin 75mg/Clopidogrel 75mg)

Moderate or severe stroke

Loading doses of aspirin 300mg as early as possible → Same dose for 2 weeks → Single antiplatelet indefinitely (Aspirin 75mg/Clopidogrel 75mg)

Treatment Options

Thrombolysis

Within 4.5 Hours

Alteplase: 0.9 mg/kg (10% bolus, rest over 1 hr)
Tenecteplase: 0.25 mg/kg IV bolus (max 25 mg)

Mechanical Thrombectomy

Within 6 Hours

For Large vessel occlusion in CT Angiogram

Can be extended up to 24 hrs with favorable perfusion imaging (Small infarcted core, large penumbra)

Extended Treatment Window (Tissue-Based Decision)

In selected patients,

CT/MRI Perfusion Scan can justify thrombolysis beyond 4.5 hours, often up to 9 hours or more, by demonstrating:

- Small infarct core
- Large penumbra
- Mismatch between core and penumbra

This is especially useful for:

- Wake-up strokes (unknown onset time)

MRI (DWI-FLAIR) mismatch could be helpful

This allows for a tissue-based (rather than time-based) decision.

Hemorrhage After Thrombolysis

If sudden deterioration of GCS → Suspect ICH



Stop infusion → Repeat NCCT urgently

Definition of Symptomatic ICH

Intracerebral hemorrhage on NCCT and >4 points deterioration in NIHSS

Use ECASS Classification

Post-Stroke Care

Rehabilitation:

- Start early (Speech therapy, Physiotherapy, Occupational therapy)

Secondary Prevention:

- Manage HTN, DM, Lipids
- Antiplatelet or Anticoagulant (AF)

Lifestyle: Quit smoking, Diet, Exercise

