ACUTE ISCHAEMIC STROKE

Time is brain · thrombolysis & thrombectomy

TIME IS
brain

FIRST MINUTES: note LAST-KNOWN-WELL time, glucose, NIHSS. Immediate non-contrast CT ± CTA / CT-perfusion. Exclude haemorrhage before any thrombolysis.

THROMBOLYSIS

≤ 4.5 h (extended with imaging)

- **Agent -** tenecteplase 0.25 mg/kg IV bolus, OR alteplase 0.9 mg/kg (10% bolus)
- **Window -** ≤ 4.5 h from onset; extended (to 9 h / wake-up) if imaging shows salvageable tissue
- **BP before lysis -** must be < 185/110 - treat (labetalol / GTN) first
- **Then -** no antiplatelets / anticoagulants for 24 h; repeat CT before starting

THROMBECTOMY

large-vessel occlusion

- **Indication -** proximal anterior LVO (ICA / M1) with salvageable brain
- **Window -** up to 24 h with favourable perfusion imaging (DAWN / DEFUSE-3)
- **Give lysis too -** if eligible - do not skip thrombolysis to go straight to clot retrieval
- **Transfer early -** activate the stroke / neurointervention team without delay

SUPPORTIVE CARE

- **BP -** permissive if no lysis (treat only if > 220/120); < 185/110 if thrombolysed
- **Glucose -** target 7.8-10 mmol/L; treat hypo- and hyperglycaemia
- **Temperature -** treat fever; avoid hyperthermia
- **Then -** aspirin 300 mg at 24 h; swallow screen; stroke unit

LYSIS CONTRAINDICATED IF

- Haemorrhage on CT · recent intracranial surgery / bleed / large infarct
- BP uncontrolled > 185/110 · platelets < 100 · INR > 1.7 / DOAC
- Recent major surgery / GI bleed; active internal bleeding
- When in doubt, discuss with the stroke physician - do not delay imaging

AFTER REPERFUSION

the first 24 hours

NEURO WATCH

Frequent neuro obs + BP; keep BP < 180/105 for 24 h after lysis. Repeat CT at 24 h BEFORE any antiplatelet.

HAEMORRHAGIC TRANSFORMATION

Sudden ↓ GCS, new headache, ↑ BP or vomiting → urgent CT. Reverse the lytic / coagulopathy; call neurosurgery.

COMPLICATIONS

Orolingual angioedema from alteplase → stop + treat. Malignant MCA / cerebellar oedema → decompressive surgery.

MIMICS & POSTERIOR CLUES: exclude hypoglycaemia, seizure / Todd's paresis, migraine, functional and sepsis-unmasking. Posterior-circulation strokes (vertigo, ataxia, diplopia, ↓ consciousness) can have a LOW NIHSS - do not dismiss them.

SECONDARY PREVENTION & WORKUP: antiplatelet (aspirin 300 mg at 24 h) or anticoagulate for AF · high-intensity statin · BP + diabetes control · carotid imaging · mechanical VTE prophylaxis (IPC), avoid early therapeutic heparin.

PEARLS & PITFALLS

- Check glucose first - hypoglycaemia is a classic stroke mimic and is instantly reversible.
- A normal early CT does not exclude ischaemia - it excludes haemorrhage; decide on time and imaging.
- Lower BP below 185/110 before thrombolysis; otherwise leave it high to perfuse the penumbra.
- Do not skip thrombolysis in a lysis-eligible patient who is also going for thrombectomy.

References: AHA/ASA Stroke Guideline 2019/2026 · ESO 2023 · DAWN / DEFUSE-3 · EXTEND / WAKE-UP.

Educational aid; verify doses against local protocol and patient factors.