Thrombolysis Delivery, Care, and Monitoring
Documentation & Pathways

- Need to follow locally agreed policies and procedures
- Follow thrombolysis pathway
- ? Need to complete Sits database
Weight

- Dose matters!
- Guessing is the last option
- Weighing hoist
- Patient (when last weighed?)
- Medical records
- Next of kin
Nursing care during tPA infusion

- Avoid unnecessary handling of the patient
- Avoid taking Bp in arm with established IV access.
- Bp should ideally be taken manually, as an automatic Bp machine may cause bruising & petechiae.
Nursing care (cont)

• No unnecessary venous or arterial punctures for at least 24 hours post infusion
  – Only if needed, Blood should be drawn from an established IV venflon where ever possible
  – Avoid any invasive procedure (NG tube, suction, catheterisation) due to increased risk if bleeding

• Apply a pressure dressing to potential sources of bleeding, and closely observe.

• Check all secretions and excretions for blood
Nursing care during 1st 24 hrs

• Patient MUST be on Bed Rest
• NO central venous access, arterial puncture or IM injections
• ? NIL BY MOUTH– Except for medication
• NO anticoagulants, aspirin or non-steroidal anti-inflammatory drugs
• NO urinary catheter, but if ESSENTIAL wait until at least 30 minutes after completing tPA infusion
• AVOID NG tube
Neurological assessments

• Monitor & record Patient’s Glasgow Coma Scale, G.C.S.

  Every 15 minutes for 2 hours post infusion
  Then
  Every 30 minutes for the following 6 hours
  Then
  Hourly until 24hrs after commencing infusion

• If G.C.S < by 2 points, or there is a significant deterioration in pts condition, Contact Medical Staff
Measurement & Interventions

Blood Pressure

• Bp & Pulse every 15 minutes for 2 hours, then every 30 minutes for 6 hours, then hourly for 16 hours
• If Bp is > 185/110 x 2 readings, then inform medical staff
• Consider drug therapy,
  ➢ i.e. Labetalol 10mg IV over 2 mins then 10-20mg every 10-15mins up to a maximum 150mg, stop when response adequate)
  ➢ GTN Infusion, titrated to give desired effect.
Measurement & Interventions

Oxygen Saturations

• Monitor Spo2 level on a continuous basis for 24 hours
• If falls < 95% consider;
  ➢ Check airway, reposition and suction if necessary.
  ➢ Check for signs of airway obstruction:
  ➢ Observe tongue for signs swelling or excessive bleeding mouth teeth and gums
• Give O2 via mask or nasal cannula 24%.
• Inform medics for review
Measurement & Interventions

Temperature

• Monitor temperature ¼ hourly for 1st two hours,
  ➢ Then ½ hourly for further 4 hours
  ➢ Then hourly for the remaining 18 hours
• Aim to keep temp <37.5.
  ➢ Consider cooling. Remove clothing, use fans,
  ➢ tepid sponging.
• Give Paracetamol 1grm 6 hourly. Orally, I.V., or PR
• If Temp >38.5. consider the Infective process.
• Sputum, MSU, Blood cultures, Inform medics.
Heart rate and Rhythm

• Continuously monitor rate & rhythm

➤ If Rate < 50 or >120
OR
➤ NEW AF or arrhythmia.

• Do 12 lead ECG and inform medics
Example of S.T.O.C. from Northumbria
### Neurological Deterioration Since Thrombolysis

If there is a fall in conscious level since thrombolysis by **1 square or more** or if speech, arm, and leg total falls by **2 squares or more** since thrombolysis, then:

- Stop alteplase infusion if it is still running
- Check BP and BM
- Inform doctor
- Doctor consider urgent CT head
- Contact stroke physician on call if unsure
- Nil by mouth unless able to reassess swallow
- Check clotting
- If haemorrhage or massive oedema on CT scan, then contact neurosurgeons
- If haemorrhage and clotting abnormal, then give cryoprecipitate

### Hyper/ Hypotension

If systolic BP **above 185mm Hg** or if diastolic **above 110mm Hg** at any time, then:

- Confirm with manual measurement (and continue with manual measurements)
- Check for pain and treat cause
- If still above range, recheck in 5 minutes
- Inform doctor
- Consider IV GTN (if GTN started then use GTN protocol and chart)

If systolic BP **below 95mmHg** then:

- Stop GTN infusion if running
- Check for external or internal bleeding (see below)
- Recheck in 5 minutes
- Inform doctor
- Give IV fluids if appropriate
- Urgent bloods for FBC/CLOTTING

### Hypoxia

If oxygen saturation **below 94%** then:

- Sit them up!
- Increase O2 if appropriate
- Inform doctor

### Bleeding

If major bleeding, stop alteplase infusion

- Inform doctor
- Give IV fluids
- Urgent bloods for FBC clotting
Adverse effects of tPA

• Anaphylactic shock
• Assess patient for signs of Angioedema of the tongue: Swelling of tongue / lips
• If angioedema develops notify stroke physician immediately
Adverse effects (cont)

• **Bleeding:**
  
  ➢ **Superficial:** due to lysis of fibrin in the haemostatic plug
  ➢ Observe potential bleeding sites: venous and arterial puncture, lacerations etc.
  
  – **Internal:** GI tract, GU tract, Respiratory, Retroperitoneal or Intracranial.

• **Actions:** If any clinically significant bleeding or deterioration of neurological status occurs,
  
  • If still in progress STOP tPA
  
  • And notify Stroke Physician immediately
Other adverse effects

- **Nausea & vomiting:**
  25% ofPts will experience this.

- **Allergy / Anaphylaxis:**
  <0.02% of Pts will experience this, observe for skin eruptions, airway tightening.

- If present inform stroke physician and implement appropriate supportive therapy as soon as possible

- **If infusion still in progress STOP tPA,**
Follow up

- Repeat NIHSS after 2 hours
- Daily neuro assessment after first 24 hours by stroke physician
- Repeat CT scan in 24 hours
- No IV heparin or aspirin for 1st 24 hours (may be started if 24Hr CT is free of haemorrhage)
Successful outcome of IV tPA

- Thrombolysis of clot
- Reperfusion of viable tissue
- Improvement in Pt function / outcome
Any Questions