THROMBOLYSIS FOR ACUTE ISCHAEMIC STROKE
Management of Suspected Anaphylactic Reaction

Suspect anaphylactic reaction if:
- Consider if any of the following develop:
  - Rash
  - Angioedema
  - Urticaria
  - Hypotension
  - Bronchospasm
  - Shock
- Treat as severe if:
  - Airway compromise
  - Clinical signs of shock

Treatment Algorithm for Anaphylactic Reactions
Adapted from Resuscitation Council UK Guidance, 2008

Suspected Anaphylactic Reaction
STOP rt-PA INFUSION
Airway, Breathing, Circulation, Disability, Exposure

Diagnosis - look for:
- Acute onset of illness
- Life-threatening Airway and/or Breathing and/or Circulation problems
- Any usually skin changes

Lie patient flat. Call for Help
High Flow Oxygen

Monitor
Blood Pressure
ECG
O₂ Saturation

ADRENALINE
1:1000 solution
0.5ml (500 micrograms) IM
Repeat in 5 minutes if no clinical improvement

TONGUE ANGIOEDEMA
See additional notes over page

Antihistamine
CHLORPHENAMINE
10-20mg slow IV

IN ADDITION

For all severe or recurrent reactions and patients with asthma give
HYDROCORTISONE
200mg slow IV

IV Fluid Challenge
500 to 1000ml
Nebulised SALBUTAMOL may be used as an adjunctive measure if bronchospasm is severe and does not respond to other treatment

1. Life Threatening Problems
Airway: Swelling, Hoarseness, Stridor
Breathing: Rapid breathing, wheeze, fatigue, cyanosis, SpO₂ < 92%, confusion
Circulation: Pale, clammy, low blood pressure, faintness, drowsy/coma

2. Risk from anaphylaxis outweighs risk of haemorrhage from IM injection. Therefore give adrenaline as per usual protocol
FACIAL / TONGUE ANGIOEDEMA

Background:
- Angioedema of the tongue has been reported in occurring in patients receiving rt-PA
- Cases series report a frequency of 1.3% to 5%\(^1\)\(^2\) (more frequently than in myocardial infarction)
- It usually manifests as mild, transient hemifacial swelling starting in the tongue, usually contra-lateral to the ischaemic hemisphere, and resolves within 24 hours\(^3\)
- Angioedema can develop hours after the rt-PA infusion is completed
- Combined observational data suggest severe, life-threatening airway compromise requiring anaesthetic intervention is rare – 0.2 to 0.8% of all patients receiving rt-PA\(^1\)\(^2\)\(^3\) or 13% of those developing angioedema
- Risk factors for developing angioedema are current use of ACE-inhibitors and involvement of the insular/frontal cortex in the acute stroke

Treatment:
- If ANY features of angioedema occur STOP THE INFUSION IMMEDIATELY (if not already completed).
- If not already in attendance, fast-page on-call MEDICAL MIDDLE GRADE
- Contact on-call ANAESTHETIST

- Commence treatment for anaphylaxis as above
  - High Flow oxygen
  - Chlorphenamine 10mg IV
  - Hydrocortisone 200mg IV

- Consider NEBULISED ADRENALINE (5ml of 1:1000 solution driven by 100% oxygen)
  - ENSURE EYE PROTECTION with goggles/wet swabs or paper towels
  - Can be repeated 2-3 hourly as required

- If no response to nebulised adrenaline within 5 minutes then give IM ADRENALINE 500micrograms (0.5ml of 1:1000 solution)
  - Risks associated with anaphylaxis outweigh the risks of haemorrhage related to IM injection during or after thrombolytic therapy

- Advanced airway management may be necessary if airway is significantly compromised, although there are specific risks associated with stroke and thrombolytic therapy
  - Airway haemorrhage due to trauma from intubation and thrombolysis
  - A drop in blood pressure due to rapid sequence induction may reduce cerebral perfusion pressure and increase the volume of ischaemic brain

- However, hypoxia due to airway compromise/loss will increase the risk of poor outcome

- Ongoing treatment
  - Once stabilised transfer to HDU or ITU as appropriate (following stroke thrombolysis the patient will normally be treated in HDU for first 24 hours).
  - Chlorphenamine 10mg IV tds
  - Hydrocortisone 100mg IV tds
  - Nebulised Adrenaline as required

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