Protocol for Streptokinase

**INDICATIONS FOR USE**
- Acute inferior myocardial infarction
- Posterior myocardial infarction
- Any myocardial infarction where patient is >70 years old
- Ensure diastolic blood pressure in all patients is > 90mmHg

**DOSAGE**
- Streptokinase 1,500,000 IU

**PREPARATION**
- Add 5mls Na. Saline 0.9% to Streptokinase vial
- Mix gently *(Do not shake)*
- Mix contents with 45mls Na Saline 0.9% in 50ml syringe
- Infuse via graseby pump over one hour.
- Set pump rate at 50mls hour.
- When complete infuse 20mls of N. Saline to ensure that the entire dose has been given.

**SIDE EFFECTS**
- If hypotension occurs during infusion, stop infusion and lay patient in the supine position. Usually blood pressure recovers.
- Infusion can be recommenced at a slower rate.

If in any doubt contact consultant cardiologist
**Chest Pain**

**INITIAL ASSESSMENT AT PRESENTATION**

- Chest pain
  - Suspicion of Acute Coronary Syndrome
    - Persistent ST-elevation
    - Troponin
    - No persistent ST-elevation
    - Troponin
    - Normal or atypical ECG changes
  - No persistent ST-elevation
    - Troponin
    - Stratify into High Risk and Low Risk
  - Normal or atypical ECG changes
    - Troponin twice negative
    - Probably not ACS

**RISK STRATIFICATION**

**High risk patients**
- Patients with recurrent ischaemia
- Recurrent chest pain
- Dynamic ST-segment changes (*ST depression or transient elevation*)
- Early post infarct unstable angina
- Elevated troponin levels
- Diabetes
- Haemodynamic instability
- Major Arrythmia (*VF, VT*)

**Low risk patients**
- No recurrence of chest pain
- No elevation of troponin
- No ST-segment depression
- Negative or flat T-waves
- Normal ECG
- Second negative troponin

**If in any doubt contact consultant cardiologist**

Adapted from the European Society of Cardiology Guidelines
A&E Protocol for Suspected AMI

Ischaemic chest pain

A&E nurse
- 12 Lead ECG
- Establish cardiac monitoring
- IV access both arms
- Aspirin 300mg Chewable
- Diamorhine (2.5mg - 5mg)
- Phone CCU (book bed)

A&E physician
- Brief target history
- Physical examination
- Blood profile
- Interpretation of ECG
- Order Chest X Ray
- Target time 10 minutes

Definite ECG changes indicating AMI
- ST segment elevation > 1mm in two or more limb leads
- ST segment elevation > 2mm in two or more adjacent chest leads
- New LBBB or existing LBBB associated with convincing clinical symptoms

Contraindications to thrombolysis
- Traumatic CPR
- Severe hypertension > 180/110
- Recent bleeding, e.g. episode of internal bleeding in the last 4 weeks or active peptic ulcer disease
- Other stroke or TIA (in last 6 months)
- Known or suspected aortic dissection
- Coagulation disorder or warfarin therapy (urgent INR)
- Previous haemorrhagic stroke
- Major surgery or head trauma (in last month)
- Pregnancy

If no contraindications thrombolysis with appropriate drug

Indications for Streptokinase
- Inferior MI
- Any MI where patient > 70 yrs old

Indications for TPA
- Anterior MI < 70yrs & onset pain < 6 hrs
- Previous Streptokinase ever
- Systolic BP < 90mm/hg
- New LBBB < 70 yrs & onset of pain < 6hrs

Any contraindications fast track to CCU

If in any doubt contact consultant cardiologist
Strategy in Patients Presenting with Suspicion of ACS

- **Persistent ST elevation**
  - Thrombolysis
  - PCI

- **No persistent ST-elevation**
  - ASA, LMW heparin
  - Clopidogrel
  - Beta-blockers, Nitrates

- **Undetermined Diagnosis**
  - ASA

- **High risk**
  - GPIIb/IIIa
  - Coronary angiography
  - PCI, CABG or medical management depending on clinical and angiographic features

- **Low risk**
  - Second troponin measurement
  - Twice negative
  - Stress test
  - Coronary angiography

- **If in any doubt contact consultant cardiologist**
## Protocol for TPA

### Indications
- Anterior myocardial infarction < 70 years onset of symptoms < six hours
- Previous Streptokinise ever
- Hypotension systolic blood pressure < 90mmgh

### Dosage
- 15mg TPA bolus
- IV infusion of 0.75mg/kg tpa over 30 minutes *(to maximum of 50 mg)*
- IV infusion of 0.5mg/kg over 60 minutes *(to maximum of 35mg)*

### Preparation
**Patients over 65kg**
- Mix 2 vial of 50mg with water provided in containers
- Remove 15mg *(15mls)* from one vial *(bolus infusion)* leaving 35mg in vial
- Withdraw 50mg from other vial and add to 50ml syringe
- Do not shake vial, mix gently to avoid inactivation of drugs
- Administering TPA
- Give 15mls bolus
- Connect 0.75mg/kg *(usually 50mg)* to grazby pump and infuse over 30minutes *(set pump at 100mls/hour)*
- On completion of first 50mg TPA, infuse further 0.5mg/kg *(usually 35mg over one hour* *(Probable in CCU)* rate set at 35 mls/hr)*

### Administering Heparin
- Heparin bolus of 5000 units is given simultaneously as TPA bolus
- Give via alternative venflon site from TPA
- IV Heparin infusion can be commenced in CCU

If in any doubt contact consultant cardiologist
IN-PATIENT ETT PROTOCOL

- All troponin T negative patients with suspected/definite acute coronary syndromes who are biologically fit (i.e. potential candidates for revascularisation) should undergo an in-patient ETT.
- Troponin T positive patients should be referred for cardiology review and should not normally undergo ETT without prior discussion with a cardiologist.
- Patients undergoing ETT must have been pain free for 12 hours.
- Patients will undergo ETT on medical therapy (e.g. beta-blockers).
- The negative troponin test must have been taken 12 hours after the last episode of chest pain.

THE FOLLOWING CATEGORIES OF PATIENTS SHOULD USUALLY BE REFERRED FOR IN-PATIENT CARDIOLOGY REVIEW BEFORE UNDERTAKING ETT:

- Patients with presentation suggesting crescendo angina (e.g. multiple episodes of chest pain in days/weeks prior to admission).
- Patients who experience further chest pain after admission.
- Patients with dynamic ST segment changes on admission ECG (e.g. ST depression >1mm).
- High risk features (refer to European Society Cardiology Guidelines).
- Patients unable to exercise.
- ECG exhibiting left bundle branch block.
- Patients already under outpatient cardiology care.