METRO NORTH HOSPITAL & HEALTH SERVICE
THE PRINCE CHARLES HOSPITAL PROCEDURE
TPCHS14020v1

TITLE
Non-ST elevation myocardial infarction (NSTEMI) management

DESCRIPTION
Medical management of NSTEMI and high risk Acute Coronary Syndrome (ACS) patients

TARGET AUDIENCE
Medical and nursing staff within TPCH Cardiology Program and Emergency Department

FACILITY/SERVICE
The Prince Charles Hospital

This procedure applies to patients with a clinical diagnosis of Non-ST-elevation myocardial infarction based on clinical history and examination, ECG findings and cardiac enzymes. Several cardiac and non-cardiac conditions can result in elevated troponin levels. The interpretation of cardiac enzymes should be taken in the full clinical context of the patient’s presentation.

NSTEMI management

1. **Aspirin** - 300mg (chewed) as a stat dose, followed by 100mg daily.

2. **Anticoagulation** - Unfractionated heparin (UFH) or LMWH (e.g. enoxaparin)
   - In unstable patients who may require urgent angiography and patients with renal failure (CrCl < 30mLs/min) IV heparin is preferred and is continued up until the time of PCI.
   - Enoxaparin 1mg/kg subcutaneously twice daily is an alternative in patients with preserved renal function. Creatinine clearance (CrCl) must be checked (calculator on the computer desktops). Patients with CrCl between 30-50 mL/min whose therapy extends beyond 48 hours must have anti-Xa levels measured.
   - Patients at extremes of body weight (BMI > 35kg/m², calculated dose > 150mg or weight < 50kg) unfractionated heparin is preferred. If LMWH is necessary anti-Xa levels must be monitored.
   - The morning dose (after 2400hrs) of enoxaparin should be omitted on the day of angiography unless specified by the treating cardiologist.
   - Anticoagulation should be continued up until revascularisation (if performed) otherwise for medically managed patients for minimum of 48 hours or for the duration of hospitalisation up to maximum of 8 days.
   - **Patients on Warfarin** - cease Warfarin and commence parenteral anticoagulation when INR <2.
   - **Patients on novel anticoagulation agents** (Dabigatran, Rivaroxiban, Apixaban); cease novel anticoagulant and discuss parenteral anticoagulation with consultant cardiologist.

3. **Second antiplatelet agent (P2Y12 inhibition)** - Clopidogrel OR Ticagrelor can be used as a second antiplatelet agent
   - Clopidogrel 600mg loading dose is acceptable in all situations, followed by 75mg daily
   - Ticagrelor 180mg loading dose followed by maintenance dose of 90mg BD can be considered as an alternative to clopidogrel EXCEPT in patient at risk of bleeding (e.g. >75yrs, weight <60kg, previous CVA or ICH, history of GI bleed, anaemia, thrombocytopenia, Warfarin or novel anticoagulant) or in patients at risk of bradycardia (second or third degree AV block).
- If coexisting indication for cardiac surgery (e.g. concomitant severe aortic stenosis or suspected surgical disease) then P2Y12 inhibition should be withheld.

**Adjunctive therapy**

4. **ACE inhibitor** - if no contraindications; ATRB if intolerant to ACE inhibitor.

5. **Beta blocker** - if no contraindications (CI include signs of heart failure, low output state, risk of cardiogenic shock, PR >0.24s, second or third degree AV block, reactive airways disease).

6. **Statin** - all patients should be commenced early on high dose statin therapy irrespective of their cholesterol level.

7. **Anti-ischaemic** medication as required
   - Patients requiring commencement of intravenous GTN for refractory ischemia must be discussed with cardiologist

8. **Glycoprotein IIa IIIb inhibitors** (Abciximab, Tirofiban, Eptifibatide)
   - Most commonly used during or immediately post PCI (delayed provisional)
   - Upstream use (pre-catheterisation) – must be discussed with cardiologist.

9. **Aldosterone antagonist** - consider in patients with EF <40% and diabetes or signs of heart failure.

10. **Proton Pump Inhibitor** - consider pantoprazole in patients at risk of GI bleeding (e.g. history of GI bleed, peptic ulcer, concomitant steroids or anticoagulation, elderly).

**Revascularisation**

Most NSTEMI patients are treated with an early invasive strategy with angiography +/- PCI ideally within **24-48 hours** of presentation. The most pronounced benefit is in the higher risk patients.

Very high risk patients (refractory angina, severe heart failure, ventricular arrhythmias, and haemodynamic instability) should have immediate invasive evaluation.

Following PCI anticoagulation is generally not required unless specified by the treating cardiologist or when there is a separate indication (e.g. AF, mechanical heart valve, LV thrombus). Timing and intensity of restarting anticoagulation post vascular access should be discussed with the interventional cardiologist if not already specified.

All patients post PCI must be on dual antiplatelet therapy (aspirin and second antiplatelet agent e.g. clopidogrel, ticagrelor) with duration specified by the interventional cardiologist (minimum 1 month for bare metal stent and 6-12 months for drug-eluting stent although usually 12 months post ACS regardless of stent type).
MARKETING/COMMUNICATION
Marketing/Communication Responsibility
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Local – CCU/CPAS Director & NUM, CCU CNT, CNC Q&S Heart-Lung Program
Marketing/Communication Strategy
• Publish on QHEPS
• Email notification

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Medium Risk
Audit Strategy
Monitoring
Audit Tool Attached
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CCU/CPAS Management Team
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Endorsement

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