Country Health SA

Clinical Protocol – ENOXAPARIN (CLEXANE)

This clinical guideline or clinical protocol is based on a review of best practice evidence and expert opinion. It is intended to guide practice and does not replace clinical judgement. Health practitioners in Country Health SA are expected to review specific details of each patient and assess the applicability of the relevant guideline to that clinical situation. When clinical management varies, the rationale must be documented in the patient medical records including the decision made, by whom, and detailed reasons for the departure from the guideline/protocol.

Endorsed by Drug & Therapeutics Committee

National Safety and Quality Health Service Standards

Tick the Standard (s) this document relates to (can be more than one).

Governance for Safety and Quality in Health Care	Partnering with Consumers	Preventing & Controlling Healthcare associated infections	Medication Safety	Patient Identification & Procedure Matching	Blood and Blood Products	Clinical Handover	Preventing & Managing Pressure Injuries	Recognising & Responding to Clinical Deterioration	Preventing Falls & Harm from Fall
			✓						

SYNONYMS: Enoxaparin (Clexane)

PRESENTATION: 40 mg/0.4 mL (anti Xa: 4000 units) pre-filled syringe
60 mg /0.6 mL (anti-Xa: 6000 units) pre-filled syringe
100 mg/1.0 mL (anti-Xa: 10 000 units) pre-filled syringe

INDICATION: Prophylaxis of thromboembolic disorders of venous origin
Treatment of established deep vein thrombosis (DVT) and pulmonary emboli (PE)
Treatment of unstable angina/acute-STEMI/NSTEMI

ACTION: Inactivate clotting factors IIa (thrombin) and Xa by binding to antithrombin III

CONTRAINDICATIONS: Allergy to enoxaparin/heparin or its derivatives (including other low molecular weight heparins)
Acute bacterial endocarditis
Active bleed
Major bleeding disorder
Drug-induced thrombocytopenia
Active gastric/peptic ulcers
Haemorrhagic stroke

<u>Precaution</u>
Dose must be reduced in renal impairment
Pregnancy and lactation Australian Category C
May be used in pregnancy at the recommended dose
May be used in breastfeeding
Low Molecular Weight Heparins (LMWHs – including enoxaparin) are not recommended in pregnant women with mechanical prosthetic heart valves as they provide inadequate anticoagulation

PREPARATION:

STABILITY:

ADMINISTRATION:

STEMI

Loading Dose

< 75 years: 30 mg IV bolus plus 1 mg/kg SC, max. 100 mg dose
≥ 75 years: 0.75 mg/kg SC (No IV bolus), max. 75 mg dose

If creatinine clearance > 30 ml/min

Post loading dose
< 75 years: 1 mg/kg SC every 12 hours, max. dose 100 mg for first post-loading dose
≥ 75 years: 0.75 mg/kg SC every 12 hours, max. dose 75 mg for first post-loading dose

If creatinine clearance ≤ 30 ml/min

Post loading dose 1 mg/kg SC daily

Unstable Angina/NSTEMI

Intermediate risk patient

1 mg/kg every 12 hours by SC injection for 48 hours in people with normal renal function

Troponin positive or otherwise high risk

1 mg/kg every 12 hours by SC injection for 48 hours in people <75 years old with creatinine clearance > 30 ml/min or
1 mg/kg every 24 hours for people > 75 years old or creatinine clearance < 30 ml/min

Adjust dose to nearest 2.5 kg ideal body weight (i.e. 68 kg = 67.5 kg adjusted body weight)

For DVT/ PE

1 mg/kg subcutaneously twice daily or
1.5 mg/kg daily for 5-10 days
CrCL < 30 mL/min – give 1 mg/kg subcutaneously once daily
Twice daily dosing should be used for higher risk patients i.e. cancer

Prophylaxis

20–40 mg subcutaneously daily (dose is dependent on type of surgery/patient risk factors)
CrCL < 30 mL/min – give 20 mg subcutaneously once daily

Subcutaneous

Prefilled syringes. The prefilled syringes are ready for immediate use. The whole length of the needle should be introduced vertically (at a 90deg. angle to the skin) into the thickness of a skin fold held gently between the operator's thumb and finger. This skin fold should be held throughout the duration of the injection.

Graduated prefilled syringes. When using the 60 mg, 80 mg, 100 mg, 120 mg and 150 mg graduated prefilled syringes, the volume to be injected should be measured precisely according to the dosage recommended, without expelling the air bubble while adjusting dosage. If the dose required is exactly 60, 80, 100, 120 or 150 mg, inject the full contents of the syringe. The whole length of the needle should be introduced vertically (at a 90deg. angle to the skin) into the thickness of a skin fold gently held between the operator's thumb and finger. This skin fold should be held throughout the duration of the injection.

COMPATABILITY:

INTERACTION: Administration with the following may increase the risk of bleeding:
NSAIDS
Antiplatelet drugs (aspirin, clopidogrel)
Anticoagulants (warfarin, Dabigatran, rivaroxiban, apixaban)

DOSE TITRATION: Refer to Administration above

DURATION OF TREATMENT:

MONITORING: Check urine, faeces, and vomitus for macroscopic blood
No need to check APTT
Monitor platelet count on days 0, 3 and 5 and then alternate days if treatment is continued
Consider monitoring anti-Xa in patients at high risk of bleeding

HAEMORRHAGE
If haemorrhage occurs seek medical advice urgently
All acute admissions must be assessed by the cardiologist prior to commencement of LMWH in view of early intervention.
If no treatment plan has been formulated – hold the morning dose of enoxaparin until after the ward round.
If there is a planned intervention – hold the morning dose of enoxaparin.

ADVERSE EFFECTS: Haemorrhage
Mild transient thrombocytopenia
Severe thrombocytopenia (rare)
Hyperkalaemia
Mild transient elevation of LFTs
Skin necrosis at injection site (rare)
Hypersensitivity manifested by - pruritus, urticaria and asthma-like symptoms
Protamine is only partially effective in reversing over-anticoagulation with LMWHs including enoxaparin