University Hospitals Plymouth NHS Trust

Clinical Haematology & Immunology

Guidelines on prescribing Enoxaparin in Primary Care

Aim of Treatment

Enoxaparin is used for the treatment and prophylaxis of Venous Thromboembolism

1. ***For the treatment of VTE disease (1.5mg/kg or 1 mg/kg bd). Generally, the 1mg bd dose is used in patients with a significantly increased risk for recurrent VTE or who have developed recurrent VTE on a treatment dose of an oral anticoagulant.***

a. Patients unable to stabilise INR on warfarin or with a contraindication to warfarin or DOACs
b. Patients who are starting treatment with Dabigatran or Edoxaban
c. Patients with active primary or metastatic cancer
d. Patients receiving chemotherapy
e. Pregnancy related VTE (Pre and post-partum)
f. Bridging of oral anticoagulant with Vitamin K antagonists peri-operatively
g. Bridging for sub therapeutic INR

2. ***For prophylaxis of VTE disease***

a. Prophylaxis of VTE in cancer patients on VTE inducing therapy, after major surgery in the abdomen / pelvis for cancer or who are at high risk of VTE
b. Prevention of VTE in pregnancy (High risk patients-pre and post-partum)
c. Extended post joint replacement surgery for patients with a contraindication to DOACs
d. Extended post POP – usually for at least 6 weeks or the duration of the POP

N.B. As LMWH is excreted by the kidneys, patients with renal failure (GFR < 30ml/min) should receive a dose reduction, usually 20mg daily of enoxaparin for prophylaxis or 1mg/kg once daily for treatment doses

Table 1 – Dose banding for Treatment doses of enoxaparin – DVT/PE

Weight	Dose (GFR > 30mls/min)	Dose (GFR <30mls/min)
40 – 49kg	60mg Daily	40mg Daily
50 – 59kg	80mg Daily	60mg Daily
60 – 74kg	100mg Daily	60mg Daily
75 – 89kg	120mg Daily	80mg Daily
90 – 109kg	150mg Daily	100mg Daily
110 – 120kg	180mg Daily	120mg Daily
121 – 150kg	Contact Consultant Haematologist	Contact Consultant Haematologist

Table 2 – Prophylactic doses

GFR	<50kg	50-100kg	100-150kg
> 30mls/min	20mg daily	40mg daily	40mg BD
< 30mls/min	20mg daily	20mg daily	40mg daily

Table 3- Suggested Prophylactic dose for antenatal and postnatal LMWH

Weight	Enoxaparin
<50kg	20 mg daily
50-90 kg	40 mg daily
91-130kg	60 mg daily*
131-170kg	80 mg daily*
>170 kg	0.6mg/kg/day*
High prophylactic dose for women weighing 50-90kg	40 mg 12 hourly

*May be given in 2 divided doses

Monitoring requirement

1. FBC: at base line and as clinically indicated
2. Renal Function: at base line and at least 3 monthly depending on patient's risk of deterioration
3. Body weight: at initiation and periodically , dose according to body weight to avoid over and under treatment
4. Potassium: Check on initiation, then periodically, dependent on the patient's risk of hyperkalaemia.
   (LMWHs can inhibit aldosterone secretion, resulting in hyperkalaemia. Patients with diabetes mellitus, chronic renal failure, acidosis, raised plasma potassium or taking potassium-sparing drugs are more susceptible. The risk appears to increase with duration of treatment)
5. Anti-Xa activity: **ONLY** in patients receiving a treatment dose and who are: pregnant, morbidly obese (BMI >35) or have renal failure (eGFR <30ml/min) and some high risk pregnant ladies on prophylactic dose. (Citrated blood-light blue tube) 3 hours after the third dose initially and repeat if patients condition changes or as advised by haematology. Send sample to the haemostasis laboratory at Derriford, on Monday or Thursday mornings only. State time of dose and time blood sample taken on the blood form

Heparin induced thrombocytopenia (HIT) is a rare side effect of LMWHs, it usually but not always happens within the first 21 days of treatment. It might happen very quickly if patients have received LMWH within the preceding 6 months. Signs of HIT include a reduction in platelet count of 50% or more, thrombosis & skin allergy.
Current recommendations (ACCP – Chest Journal Supplement 2012 and BCSH) suggest that monitoring with regular platelet counts is not required for most patients on LMWHs. Patients with a recent history of cardiac bypass surgery (within last 6 months) may be at greater risk so platelets should be monitored between days 4 to 14 of LMWH therapy. If a fall in platelets of > 50% from baseline is seen HIT should be suspected and the HIT guidelines for investigation and treatment followed. Patients should be counselled on the symptoms of thrombosis. If unexplained thrombosis or an allergic skin reaction develops during treatment with LMWH, advice should be sought urgently from a senior Haematologist

Other information

Bleeding is always a concern with the use of anticoagulants. Avoid concomitant use of antiplatelet agents and anti-inflammatories if at all possible. Base-line tests to include FBC, U&E, and clotting screen should always be undertaken in order to ensure the safe use of LMWH. If baseline tests abnormal, seek advice from Haematologist.

Epidural or Spinal Anaesthesia/ Regional Anaesthesia

To prevent potential risk of neuraxial haematoma:

-Discontinue Prophylactic Enoxaparin at least 12 hours prior to the insertion of needle or placement of Epidural catheter (this can be increased to 24 hours if patient has creatinine clearance <30 mls/min)

-Discontinue Treatment dose Enoxaparin at least 24 hours prior to the insertion of needle or placement of catheter.

Contraindications:

1. Hypersensitivity to Enoxaparin, Heparin and its derivatives
2. History of Immune mediated Heparin Induced Thrombocytopenia (HIT) within past 100 days or in presence of circulating antibodies

Osteoporosis:

LMWHs are associated with a reduced incidence of osteoporosis than UFH. However, the small risk should be mentioned to all patients in whom extended treatment dose LMWH is being used.

Administration by District Nurses:

If a patient is unable or unwilling to self-administer, the ward nurses discharging the patient should arrange for a District Nurse to administer the LMWH. A Community Prescription card is required to be filled in and given to the patient to be handed on to the District Nurse.

Practical advice related to administration of Enoxaparin:

It is understood that district nurses may not be able to attend patients exactly at the designated time for the subsequent dose of Enoxaparin. It is therefore acceptable and pragmatic that each dose may be either brought forward or pushed back by a maximum of 4 hours on a day to day basis.

References

1. Electronic Medicine Compedium. eMC: Summary of Product Characteristics
2. RCOG Green top guideline : Reducing the Risk of VTE during Pregnancy and the Puerperium-April 2015

Trust Guidelines

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November 2021	3

Accountabilities	
Lead	Dr Yin Thi
Reviewed by (Group)	Haematology Morbidity & Mortality (Clinical Governance) meeting
Approved by (Lead)	Dr Hannah Hunter (Service Line Clinical Director)

Links to other documents

N/A

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1	July 2012	Document created
2	November 2018	Full guideline review
3	November 2021	Full guideline review

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