University Hospital of South Manchester NHS
NHS Foundation Trust

# Greater Manchester Interface Prescribing Group Shared Care Template

| Shared Care Guideline for Enoxaparin for the treatment of VTE in cancer patients | | Reference Number |
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| **Author(s)/Originator(s): (please state author name and department)**<br>Dr Simon Watt, Consultant Haematologist<br>Johanna Watts, Senior clinical pharmacist - Cardiology. | | **To be read in conjunction with the following documents:**<br>Current Summary of Product characteristics (http://www.medicines.org.uk)<br>BNF |
| **Date approved by Commissioners:**<br>September 2011 | **Review Date:**<br>**September 2013** | |

## Please complete all sections

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| **1. Licensed Indications** | The prophylaxis of thromboembolic disorders of venous origin, in particular those which may be associated with orthopaedic or general surgery.<br><br>The prophylaxis of venous thromboembolism (VTE) in medical patients bedridden due to acute illness.<br><br>The treatment of venous thromboembolic disease presenting with deep vein thrombosis, pulmonary embolism or both.<br><br>The treatment of unstable angina and non-Q-wave myocardial infarction, administered concurrently with aspirin.<br><br>Treatment of acute ST-segment Elevation Myocardial Infarction (STEMI) including patients to be managed medically or with subsequent Percutaneous Coronary Intervention (PCI) in conjunction with thrombolytic drugs (fibrin or non-fibrin specific).<br><br>The prevention of thrombus formation in the extracorporeal circulation during haemodialysis. |
| **2. Therapeutic use & background** | Treatment of VTE in cancer patients. |
| **3. Contraindications (please note this does not replace the SPC or BNF and should be read in conjunction** | Contraindicated in patients with acute bacterial endocarditis, active major bleeding and conditions with a high risk of uncontrolled haemorrhage, including recent haemorrhagic stroke, heparin induced thrombocytopenia (HIT) in patients with a positive in-vitro aggregation test in the presence of enoxaparin; active gastric or duodenal ulceration; hypersensitivity to either enoxaparin sodium, heparin or its derivatives including other Low |

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| **with it).** | Molecular Weight Heparins; in patients receiving heparin for treatment rather than prophylaxis, locoregional anaesthesia in elective surgical procedures is contraindicated. | |
| **4. Prescribing in pregnancy and lactation** | This drug can be prescribed in the pregnant and breastfeeding patient. Under these circumstances prescribing should be the responsibility of a specialist if used in a pregnant patient (as this is still classed as a Red indication), or GP if used in a breastfeeding patient. | |
| **5. Dosage regimen for continuing care** | Route of administration | subcutaneous |
| | Pre-filled syringes:<br><br>20 mg Injection — Enoxaparin sodium 20 mg (equivalent to 2,000 IU anti-Xa activity) in 0.2 mL Water for Injections<br><br>40 mg Injection — Enoxaparin sodium 40 mg (equivalent to 4,000 IU anti-Xa activity) in 0.4 mL Water for Injections<br><br>60 mg Injection — Enoxaparin sodium 60 mg (equivalent to 6,000 IU anti-Xa activity) in 0.6 mL Water for Injections<br><br>80 mg Injection — Enoxaparin sodium 80 mg (equivalent to 8,000 IU anti-Xa activity) in 0.8 mL Water for Injections<br><br>100 mg Injection — Enoxaparin sodium 100mg (equivalent to 10,000 IU anti-Xa activity) in 1.0 mL Water for Injections | |
| | Pre-filled syringes:<br><br>120 mg Injection — Enoxaparin sodium 120 mg (equivalent to 12,000 IU anti-Xa activity) in 0.8 mL Water for Injections<br><br>150 mg Injection — Enoxaparin sodium 150 mg (equivalent to 15,000 IU anti-Xa activity) in 1.0 mL Water for Injections<br><br>Clexane ® Multidose Vial - Vials containing 300 mg enoxaparin (equivalent to 30,000 IU anti-Xa activity) in 3.0 ml. Sterile pyrogen-free solution for injection contained in a multidose vial for single patient use.<br><br><u>Dosage Regimen</u><br><br>Clexane should be administered subcutaneously as a single daily injection of 1.5 mg/kg; usually reduced to 1.2mg/kg once daily after 6 weeks. | |
| | Is titration required | **No** |
| | Adjunctive treatment regime: n/a | |
| | Conditions requiring dose reduction:<br>The dosage of clexane should be reduced to 1mg/kg od in patients with severe renal impairment (creatinine clearance <30ml/min). Such patients should be referred back to the specialist for management. | |
| | Usual response time<br>N/A | |

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| | Duration of treatment:<br>To be clearly stated on discharged letter to GP. Usually continued long-term for patients with active cancer (minimum 3 months). In such cases the GP should discuss with cancer clinician length of therapy and whether cancer is still active. |
| | Treatment to be terminated by:<br>To be terminated by GP at end of defined treatment course. Discontinuation prior to end of treatment course should be discussed with the responsible hospital clinician, unless there are exceptional circumstances. |
| | **NB. All dose adjustments will be the responsibility of the initiating specialist care unless directions have been specified in the medical letter to the GP.**<br><br>The GP should measure renal function and weight at least every 6 months and 2 monthly if eGFR below 50ml/min and dosing adjusted as needed. The frequency of monitoring weight and renal function should be dependent on clinical need and judged likelihood for these parameters to change. |
| **6.Drug Interactions**<br><br>***For a comprehensive list consult the BNF or Summary of Product Characteristics*** | The following drugs must <u>not</u> be prescribed without consultation with the specialist:<br><br>• Oral vitamin K antagonists (warfarin, acenocoumarol, phenindione)<br>• Oral direct thrombin inhibitor (dabigatran)<br>• Oral inhibitor of activated factor X (rivaroxiban) |
| | The following drugs may be prescribed with caution:<br>• Antiplatelet drugs (aspirin, clopidogrel, prasugrel, dipyridamole, ticagrelor)<br>• Non-steroidal anti-inflammatory drugs<br>• Systemic glucocorticoids |
| **7. Adverse drug reactions**<br><br>*For a comprehensive list (including rare and very rare adverse effects), or if significance of possible adverse event uncertain, consult Summary of Product Characteristics or BNF* | **Specialist to detail below the action to be taken upon occurrence of a particular adverse event as appropriate. Most serious toxicity is seen with long-term use and may therefore present first to GPs.** |

| **Adverse event**<br>System – symptom/sign | **Action to be taken** Include whether drug should be stopped prior to contacting secondary care specialist | **By whom** |
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| Minor bleeding (i.e. mild self terminating epistaxis, bruising) | Continue enoxaparin. Contact responsible hospital clinician. | GP |
| Major bleeding (i.e. epistaxis lasting >10 minutes, haematemesis) | Stop clexane. Contact responsible hospital clinician. Admit to secondary care if clinically indicated. | GP |
| Hyperkalaemia | Contact responsible hospital clinician. Admit to secondary care if clinically indicated. | GP |
| Thrombocytopenia | Contact responsible hospital clinician and/or haematologist | GP |
| Thrombosis | Admit to secondary care | GP |

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| | The patient should be advised to report any of the following signs or symptoms to their GP without delay:<br>• Bleeding a lot from a wound<br>• A painful rash of dark red spots under the skin which do not go away when pressure is applied<br>• Sudden severe headache<br>• A feeling of tenderness and swelling in the stomach<br>• An allergic reaction. The signs may include: a rash, swallowing or breathing problems, swelling of lips, face, throat or tongue<br>•Bruising more easily than usual<br>• Signs of PE or DVT |
| | Other important co morbidities (e.g. Chickenpox exposure). Include advice on management and prevention and who will be responsible for this in each case:<br>As there is a risk of antibody-mediated heparin-induced thrombocytopenia also occurring with low molecular weight heparins, regular platelet count monitoring should be considered prior to and during therapy with these agents. Baseline platelet count will be measured prior to commencing enoxaparin by secondary care. Primary care should measure platelet count (as part of a full blood count), once during day 5-7 and once during days 10-14 unless this has already be completed during the patients admission in secondary care. If there is a significant drop in the platelet count (30-50% of initial value) clexane should be stopped and the haematologist contacted. Following initial FBC monitoring as described above, FBC should be measured as often as is clinically indicated.<br><br>Enoxaparin injection should be used with caution in conditions with increased potential for bleeding, such as: impaired haemostasis, history of peptic ulcer, recent ischaemic stroke, uncontrolled severe arterial hypertension, diabetic retinopathy, recent neuro- or ophthalmologic surgery.<br><br>Heparin can suppress adrenal secretion of aldosterone leading to hyperkalaemia, particularly in patients such as those with diabetes mellitus, chronic renal failure, pre-existing metabolic acidosis, a raised plasma potassium level or taking potassium sparing drugs. The risk of hyperkalaemia appears to increase with duration of therapy but is usually reversible. Plasma potassium should be measured in patients at risk before starting heparin therapy and monitored regularly thereafter particularly if treatment is prolonged beyond about 7 days.<br><br>There have been cases of intra-spinal haematomas reported with the concurrent use of enoxaparin and spinal/epidural anaesthesia or spinal puncture resulting in long term or permanent paralysis. The responsible hospital clinician should be contacted before any such procedures are undertaken. |
| | Any adverse reaction to a black triangle drug or serious reaction to an established drug should be reported to the MHRA via the "Yellow Card" scheme. |
| **8.Baseline investigations** | • FBC<br>• U and E (measuring specifically renal function and potassium)<br>• Accurate patient weight. |
| **9. Ongoing monitoring requirements to be undertaken by GP** | **Is monitoring required?** **Yes** |

| **Monitoring** | **Frequency** | **Results** | **Action** | **By whom** |
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| FBC | Once on day 5-7 and once on day 10-14. | If platelet level drops by >30% of the initial value | Contact haematologist and responsible hospital clinician | GP |

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| | FBC | For ongoing treatment, monitor FBC as often as clinically indicated. | | | |
| | Potassium | Dependent on patients risk of developing hyperkalaemia | >5.5mmol/L | Contact responsible hospital clinician if mild. Admit to secondary care if severe. | GP |
| | Renal function | Dependent on risk of deterioration in renal function, minimum every 6 months. If creatinine clearance is 30-50ml/min measure every 2 months/ | CrCl<30ml/min | Reduce dosage to 1mg/kg od | GP |
| | Patient weight (kg) | Dependant on risk of weight change, minimum every 6 months | | Adjust dosage according to weight (1.5mg/kg od or 1mg/kg od if renal impairment) | GP |
| **10. Pharmaceutical aspects** | Do not store above 25°C. Do not refrigerate or freeze.<br><br>Clexane pre-filled syringes are single dose containers - discard any unused product | | | | |
| **11. Secondary care contact information** | **If stopping medication or needing advice please contact:** | | | | |
| | **Dr** *[insert text here]*_____ | | | | |
| | **Contact number:** *[insert text here]*_____ | | | | |
| | **Hospital:** *[insert text here]*_____ | | | | |
| **12. Criteria for shared care** | Prescribing responsibility will only be transferred when<br>▪ Treatment is for a specified indication and duration.<br>▪ Treatment has been initiated and established by the secondary care specialist.<br>▪ The patient's initial reaction to and progress on the drug is satisfactory.<br>▪ The GP has agreed in writing in each individual case that shared care is appropriate.<br>▪ The patient's general physical, mental and social circumstances are such that he/she would benefit from shared care arrangements | | | | |

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| **13. Responsibilities of initiating specialist** | • Provide patient with relevant drug information to enable informed consent to therapy and to enable understanding of potential side effects and appropriate action.<br>• Discuss the shared care arrangement with the patient and ensure he / she understands the plan for their follow-up care.<br>• Ensure patient or carer is trained and competent in administration of enoxaparin, or that arrangements have been made for district nurses to administer.<br>• Initiate treatment<br>• Undertake baseline monitoring.<br>• Monitor patient's initial reaction to the drug.<br>• Provide GP with diagnosis, relevant clinical information and baseline results, treatment to date and treatment plan, duration of treatment before consultant review.<br>• Supply GP with a copy of this document and a summary of out-patient review or in-patient stay within 14 days, as well as the instructions provided to the patient.<br>• Provide GP with details of outpatient consultations, ideally within 14 days of seeing the patient *or* inform GP if the patient does not attend appointment.<br>• Continue to monitor and supervise the patient according to this protocol, while the patient remains on this drug, and agree to review the patient promptly if contacted by the GP.<br>• Provide GP with advice on when to stop this drug.<br>• Report any adverse events to the Committee on Safety of Medicines (CSM) at the Medicines and Health Care Regulatory Agency (MHRA).<br>• Ensure that the patient has an adequate supply of medication until GP supply can be arranged (this will usually be 7 days).<br><br>---<br><br>Initiate treatment as directed by the specialist<br><br>Ensure no drug interactions with concomitant medicines |
| **14. Responsibilities of the GP** | To monitor and prescribe in collaboration with the specialist according to this protocol<br><br>To ensure that the monitoring and dosage record is kept up to date<br><br>Symptoms or results are appropriately actioned, recorded and communicated to secondary care when necessary.<br>---<br><br>To take medication as directed by the prescriber, or to contact the GP if not taking medication |
| **15. Responsibilities of the patient** | To attend hospital and GP clinic appointments<br><br>Failure to attend will result in medication being stopped (on specialist advice).<br><br>To report adverse effects to their Specialist or GP. |
| **16. Additional Responsibilities** | Not Applicable |
| **17. Supporting documentation** | The SCG must be accompanied by a patient information leaflet. |
| **18. Patient monitoring booklet** | Not Applicable |
| **19. Shared care agreement form** | Attached below |