Northern Lincolnshire
Area Prescribing Committee

Prescribing of Low Molecular Weight Heparins (LMWHs) in North & North East Lincolnshire

- Treatment of DVT/PE
- Prophylaxis in orthopaedic patients with non-surgical lower limb immobilisation (e.g. post fracture)
- Patients with solid tumours on extended treatment
- Medical prophylaxis in high risk patients at home or in a care home

- Pre- op and post op use as a temporary alternative to warfarin / DOAC when indicated
- Medical prophylaxis for patients whilst in hospital
- Post op use in orthopaedic surgery and patients who have had major surgery to the abdomen or pelvis
- Prophylaxis of VTE in oncology patients on VTE inducing therapy
- In women with risk factors for VTE during pregnancy and up to 6 weeks post-partum

Dalteparin is the LMWH of choice of Hull University Teaching Hospitals, which provides the Haematologist services locally and the LMWH of choice of Northern Lincolnshire & Goole NHS Foundation Trust. **Appendix 1** provides information to support the prescribing in primary care.

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Appendix 1

DALTEPARIN PRESCRIBING INFORMATION FOR PRIMARY CARE

Indication	Dose of Dalteparin	Duration of Treatment
Prophylaxis of VTE *(NICE NG89)*	5000 units once daily (2500 units daily in dialysis patients)	Dependent on type of surgery and/or time taken for patient's mobility to return to normal state
Treatment of DVT / PE **See www.bnf.org.uk**	**Patient weight — Once daily dose** Under 46kg — 7500 units 46-56 kg — 10 000 units 57-68 kg — 12 500 units 69-82 kg — 15 000 units 83 kg and over — 18 000 units	For patients initiated on warfarin: until INR in range for 2 days (minimum 5 days of dalteparin) Where warfarin contraindicated: for 3 to 6 months Longer courses or life long treatment may be justified in patients at continued high risk of VTE
PREGNANCY **Prophylaxis of VTE during Pregnancy and/or following delivery** **(***RCOG Guideline 37a***)** **Treatment dose** **- during pregnancy** **- following delivery**	**Patient weight (use booking weight) — Once daily dose** Under 50kg — 2500 units 50-90 kg — 5000 units* 91-130 kg — 7500 units 131–170 kg — 10 000 units Over 170 kg — 75 units/kg/day 100 units per kg every 12 hours 200 units per kg once daily	During pregnancy and/or up to 6 weeks after delivery (dependent on level of risk). *High prophylactic (intermediate dose) for women weighing 50-90 kg: 5000 units twice daily. Please see RCOG Guideline 37a for when this dose is indicated. As Treatment of DVT/PE above (warfarin can be used postnatally, once risk or haemorrhage is low, usually 5 – 7 days after delivery).
Extended treatment and prophylaxis of VTE in patients with solid tumours **See www.bnf.org.uk**	**Patient weight — Once daily dose** Under 46 kg — 7500 units for 6 months 46 – 56 kg — 10 000 units for 30 then 7500 units for 5 months 57 – 68 kg — 12 500 units for 30 days then 10 000 units for 5 months 69 – 82 kg — 15 000 units for 30 days then 12 500 units for 5 months 83 kg – 98 kg — 18 000 units for 30 days then 15 000 units for 5 months 99 kg and over — 18 000 units for 6 months Relevance of continuing treatment beyond this period will be evaluated according to individual risk/benefit ratio, taking into account particularly the progression of cancer. Doses may be interrupted or reduced in chemotherapy induced thrombocytopenia – as advised by haematologist / oncologist	
Further notes	For patients with an increased risk of bleeding, an equivalent twice daily dosing may be recommended. Monitor FBC, BCP and coagulation (PT and APTT) at baseline to check for contraindications to anticoagulation and that renal function is adequate. Monitoring with anti-Xa assay may be appropriate in pregnancy & renal failure – obtain specialist advice. Renal failure : Dalteparin can accumulate in patients with GFR < 30 ml/min. If dalteparin treatment dose is prescribed, dose should be reduced and patient monitored closely for bleeding. Guidelines on the diagnosis and management of heparin-induced thrombocytopenia http://onlinelibrary.wiley.com/doi/10.1111/bjh.12059/full	

In certain patient groups e.g. people of African-Caribbean / African family origin, people with extremes of muscle mass e.g. bodybuilders, amputees or those with muscle wasting disorders, interpret eGFR with caution. Reduced muscle mass will lead to overestimation of actual GFR and increased muscle mass to underestimation of actual GFR. For more information see BNF "Principles of dose adjustment in renal impairment" https://www.evidence.nhs.uk/formulary/bnf/current/guidance-on-prescribing/prescribing-in-renal-impairment/principles-of-dose-adjustment-in-renal-impairment

References

1. Summary of Product. Electronic Medicines Compendium. http://emc.medicines.org.uk/
2. National Institute for Health and Care Excellence (NICE). CG 144. Venous thromboembolic diseases: the management of venous thromboembolic diseases and the role of thrombophilia testing. London: National Clinical Guideline Centre. JUNE 2014. [Accessed on: 01 DEC 2014]. Available from: http://www.nice.org.uk

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