

Clinical Guideline

Venous Thromboprophylaxis in Adult Hip Fracture Surgery, Elective Peri-Acetabular Osteotomy and Surgical Hip Dislocation

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Sep 2013	Enoxaparin switch to dalteparin	DTC

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Key:

AES – anti-embolic stockings
CrCL – creatinine clearance
HIT – Heparin-induced thrombocytopenia
VTE – venous thromboembolism

The risk of VTE is further increased in the presence of:

- Active cancer/ cancer treatment
- Age > 60 years
- Critical care admission
- Dehydration
- Known thrombophilias
- Obesity (BMI > 30 kg / m²)
- One or more significant medical co-morbidities e.g. heart disease; metabolic, endocrine or respiratory pathologies; acute infectious diseases; inflammatory conditions
- Personal or first-degree family history of VTE
- Hormone therapy - combined oral contraceptives, HRT, high dose progestogens, selective oestrogen receptor modulators
- Varicose veins with associated phlebitis
- Pregnancy or < 6 weeks post partum – Please refer to the 'Management of thrombosis and thromboprophylaxis in pregnancy and the puerperium' guideline

^a Contra-indications to AES:

- Gross oedema
- Leg deformity/condition
- Peripheral vascular disease
- If peripheral arterial disease present, seek expert opinion before fitting
- Peripheral neuropathy

^b Contra-indications to pharmacological thromboprophylaxis:

- On oral anticoagulant with INR > 2.0
- Thrombocytopenia (platelets < 50 x 10⁹ / L)
- Known bleeding disorder
- Evidence of active bleeding
- Uncontrolled hypertension (BP > 230 / 120 mm Hg)
- Lumbar puncture/ epidural/ spinal analgesia expected within next 12 hours or performed within last 4 hours (24 hours if traumatic)
- New stroke (ischaemic or haemorrhagic)

^c Anti-Xa level testing in renal failure (SEND ON ICE)

- Dalteparin levels can accumulate in renal failure over time. This is taken into account in the dosing table
- Check trough anti-Xa levels if there are concerns about bleeding or bruising after 7 days of dalteparin
- If **trough** (pre-dose) anti-Xa level is **>0.2 international units/mL**, please discuss with Thrombosis StR (bleep 0122 / switchboard)

All Hip Fracture Surgery, Peri-Acetabular Osteotomy and Surgical Hip Dislocation patients have a high risk of VTE and need thromboprophylaxis

On admission:

- AES (unless contra-indicated ^a)
- Check allergies - If patient allergic to heparins/history of HIT, consult on-call Haematology StR for alternatives (via switchboard)
- Is pharmacological thromboprophylaxis contra-indicated? ^b

Yes

Continue AES

And consider intermittent pneumatic compression device in addition if high risk. Reassess regularly

No

Does the patient have renal failure with CrCL < 30 mL / minute?

No

Dalteparin (according to weight) subcutaneously

Weight	Dalteparin dose
< 49kg	2500 units OD
50 - 99kg	5000 units OD
100-139kg	7500 units OD
140-179kg	5000 units BD
>180kg	Seek Haematology advice

Pre-op: If admitted, continue to give up to 12 hours before surgery

Post-op: Give 6 - 12 hours post wound closure and prescribe this dose on Time Dependent section of drug chart
Give subsequent daily doses at 08:00 or 18:00

Dalteparin (according to weight) subcutaneously ^c

Weight	Dalteparin dose
< 39kg	1250 units OD
40 - 99kg	2500 units OD
100-179kg	5000 units OD
>180kg	Seek Haematology advice

Pre-op: If admitted, continue to give up to 12 hours before surgery

Post-op: Give 6 - 12 hours post wound closure and prescribe this dose on Time Dependent section of drug chart
Give subsequent daily doses at 08:00 or 18:00

Continue pharmacological thromboprophylaxis AND AES for 28 days

Continue AES for 28 days