MIL

Oxford University Hospitals NHS
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This Medicines Information Leaflet is produced locally to optimise the use of medicines by encouraging prescribing that is safe, clinically appropriate and cost-effective to the NHS.

Prevention of Venous Thrombembolism (VTE) in adult patients undergoing orthopaedic hip and knee arthoplasty

This MIL is to be used for patients undergoing orthopaedic lower limb arthroplasty (elective hip and knee replacements). During their in-patient stay, and on discharge, patients should receive pharmacological thromboprophylaxis with a Direct Oral Anticoagulant (DOAC), Low-molecular weight heparin (LMWH) or aspirin, unless their VTE risk assessment highlights a greater bleeding risk. In this case, the reason must be documented in the medical notes, and the patient should be re-assessed regularly as the clinical condition changes.

Enoxaparin sodium is the LMWH of choice in OUH. Enoxaparin is a biological medicine and should be prescribed by brand; Inhixa® will be supplied for all enoxaparin prescriptions. Each reference to enoxaparin in this document relates to Inhixa®.

General guidance on which pharmacological treatment to use:

- We recommend using a DOAC where possible as meta-analyses show the greatest reduction of VTE, without a significant increased bleeding risk.
- In patients with a previous history of VTE, use a DOAC or LMWH. Aspirin must only be used when these options are not appropriate.

If there is a pre-existing indication for an antiplatelet agent e.g. cardiac indication, and rivaroxaban is chosen for VTE prophylaxis post hip or knee surgery, add in gastroprotection.

Table 1: Thromboprophylaxis options

Elective knee replacement	Starting 6 hours post operatively and to complete a total of 14 days: - Rivaroxaban 10mg once daily - LMWH (see separate MIL for dosing information) - Aspirin 150mg once daily + omeprazole* 20mg once daily
Elective hip replacement	Starting 6 hours post operatively - Rivaroxaban 10mg once daily to complete a total of 35 days - LMWH to complete a total of 28-35 days (see separate MIL for dosing information). - LMWH for 10 days, followed aspirin 150mg once daily + omeprazole* 20mg once daily for a further 28 days

Special Considerations:

- Apixaban can be used for VTE prophylaxis post hip and knee surgery. Apixaban 2.5mg twice daily is licensed to be commenced 12 – 24 hours post-operatively, and therefore we recommend a single dose of LMWH at 6 hours & apixaban starting on day 1 post-op for 14 days (knee) or 28-35 days (hip).

- DOACs are contraindicated in patients with a creatinine clearance (CrCl) less than 15ml/min, in patients with hepatic disease associated with coagulopathy and clinically relevant bleeding, including cirrhotic patients with Child Pugh B or C.

- DOACs should be avoided in patients taking any of the following: HIV protease inhibitors, ketoconazole, itraconazole, voriconazole, posaconazole, dronedarone, rifampicin, carbamazepine, phenytoin, phenobarbiral, primidone and St John's Wort.

Guidance when using aspirin:

For those already taking antiplatelet agents:

- **If already taking aspirin 75mg once daily** – increase the dose to 150mg temporarily

- **If already taking clopidogrel 75mg once daily** – add aspirin 150mg once daily

* if a patient is taking clopidogrel as part of their anti-platelet medication regimen, use lansoprazole as the PPI medication

Patients taking anticoagulation for a pre-existing indication:

- Patients taking oral anticoagulants prior to surgery should resume their usual anticoagulation regime as soon as clinically possible.

- Patients on warfarin will require LMWH until INR is back in range for 48 hours. Low thrombotic risk patients will require prophylactic LMWH whereas high thrombotic risk patients may require bridging with therapeutic LMWH. Please see the perioperative guidelines for further information.

- *Please note, for patients who are on pre-existing **secondary prevention** doses of DOAC (e.g. apixaban 2.5mg BD or rivaroxaban 10mg OD), prophylactic doses of LMWH are not equivalent.*

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