

Suggested Guideline for Thromboprophylaxis post Total Hip Arthroplasty (THA) and Total Knee Arthroplasty (TKA)

INTRODUCTION

Thromboprophylaxis is still very controversial in orthopaedics despite many trials on the subject. There is little doubt that prophylaxis for venous thromboembolism (VTE) is required in orthopaedic patients undergoing major operations such as major lower limb joint replacement.

The controversy lies in whether the use of *pharmacological* prophylaxis is mandatory or whether the risk of complications from anticoagulation (i.e. bleeding) outweighs the benefits.

RECOMMENDATIONS

This practice is based on recent publications from the American College of Chest Physicians (ACCP) 2012 and the American Academy of Orthopaedic Surgeons (AAOS) 2011.

1. All patients should be offered mechanical prophylaxis e.g. foot pumps/anti-embolism stockings.
2. Encourage mobilisation as early as possible.
3. All patients should be aware of the risks of DVT/PE associated with THA and TKA.
4. If the risk of bleeding from any site is deemed to outweigh the risk of VTE offer mechanical prophylaxis only. Inferior Veno-Caval (IVC) filters are not recommended.
5. Enoxaparin 40mg is commenced 6-12hrs post-surgery **for 72hrs**
6. All patients should be commenced on Proton Pump Inhibitor(PPI) e.g. Pantoprazole 40mg od
7. Aspirin 150mg is commenced at 72hrs and continued for 4 weeks after THA and TKA

ON DISCHARGE

- All patients on Aspirin should concurrently be prescribed a PPI e.g. Pantoprazole 40mg
- Each patient should be made aware of the signs/symptoms of VTE
- Each patient should be warned of the risks of GI upset/bleeding, particularly with concomitant drugs which increase the risk of bleeding e.g. SSRIs and NSAIDS
- If NSAIDS are prescribed Ibuprofen may be preferable to Diclofenac, with a stop date
- There should be a clear stop date for Aspirin. If a patient is admitted on Aspirin (usually 75mg) there should be a date set to revert to admission dose

Patients normally on Warfarin:

Warfarin is omitted for 5 doses prior to surgery. Re-start warfarin at 1800 on Day 1. **Do not administer Aspirin**, stop Enoxaparin when INR > 2.

Patients normally on Aspirin:

Aspirin 75mg is rarely stopped pre-operatively. Increase the dose to 150mg od post-operatively with mechanical prophylaxis and Enoxaparin as per recommendations.

Patients normally on Aspirin and Clopidogrel:

Clopidogrel is discontinued 7 days prior to surgery while Aspirin is continued. Continue Aspirin post-operatively with mechanical prophylaxis and Enoxaparin. Clopidogrel is recommenced after cessation of Enoxaparin i.e. at 72hours postoperatively.

Patients normally on Dabigatran:

Dabigatran is licenced in the management of atrial fibrillation. Dabigatran is omitted for 3-5 days (depending on renal function) prior to surgery. Post-operatively Enoxaparin is administered for 72hours; provided haemostasis has been achieved Dabigatran may be then be recommenced. Please note bleeding with Dabigatran is irreversible. **Do not administer Aspirin.**

Patients on Rivaroxaban:

Rivaroxaban is licenced in the management of atrial fibrillation. It is stopped 2-4 days (depending on renal function) prior to surgery Enoxaparin is administered for 72hrs and then Rivaroxaban recommenced. **Do not administer Aspirin.**

Other agents:

Please be aware of new agents coming onto the market with various licences e.g. Prasugrel and Apixiban. Please refer to the manufacturer's data sheet for recommendations during the perioperative period.

Allergy to Aspirin

True allergy to Aspirin is rare; patients may indicate an allergy to Aspirin when the real problem is GI intolerance/bleed. If the risk of bleeding is deemed high the ACCP recommends the sole use of mechanical means of VTE prophylaxis. If a patient has a true allergy an alternate may be considered e.g. LMWH or newer oral anticoagulant.

REFERENCES

The American Academy of Orthopaedic Surgeons

Preventing Venous Thromboembolic Disease in Patients Undergoing Elective Hip and Knee Arthroplasty September 2011

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Review Article

Thromboembolic Prophylaxis in Total Joint Arthroplasty

David Knesek, Todd C. Peterson, and David C. Markel

Thrombosis Volume 2012, Article ID 837896, 8 pages

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Cecilia Becattini, Giancarlo Agnelli, Alessandro Schenone et al

N Engl J Med 2012; 366:1959-67

<http://www.nejm.org/doi/pdf/10.1056/NEJMoa1114238>

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David R. Anderson, MD; Michael J. Dunbar, MD; Eric R. Bohm, MD et al

Ann Intern Med. 2013;158:800-806.

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