

GUIDELINE: Post-Discharge DVT Prophylaxis for Trauma Patients

Summary: Patients who remain significantly immobilized at the time of discharge, such as those with spinal cord injury, pelvic fractures or long bone fractures, remain at risk for DVT and PE. A prophylactic regimen should be maintained until full mobility is resumed with full mobility being defined as the patient being weight bearing as tolerated on **both lower limbs**, or for a period of at least 4-6 weeks. A low molecular weight heparin (LMWH), such as enoxaparin, is preferred given its efficacy in the trauma population. If a patient has contraindications to LMWH (e.g. renal dysfunction) or chooses not to use LMWH, an alternate therapy should be considered. Alternatives may include aspirin, warfarin, or subcutaneous heparin (in the rehabilitation setting). Follow up and decision to stop prophylaxis will remain the responsibility of the trauma service unless positively handed off to the primary care provider.

Guideline Text:

A. Patient selection for post-discharge anticoagulation:

Patients who remain significantly immobilized due to injury will continue anticoagulation after discharge from the hospital, regardless of their disposition (i.e. home, skilled nursing facility, acute rehab). Specific subgroups are as follows:

1. Spinal cord injury (complete or incomplete motor paralysis)
2. Pelvic fractures requiring operative repair with prolonged immobility (>5 days)
3. Complex long bone fractures that limit mobility (i.e. open fractures, more than one fracture in same extremity, or multiple fractured extremities) **or any fracture (including non-op pelvic fracture)** that results in the patient being other than WBAT on bilateral lower extremities as their weight bearing status.

B. Medication selection for post-discharge anticoagulation:

Provided that there continues to be no contraindications to anticoagulation, extend current approach for inpatient DVT prophylaxis with modifications as noted below. With the exception of spinal cord injury, patients may be discharged home on enoxaparin 40 mg SC daily to improve adherence. Patients with SCI are most likely being discharged to a rehab facility where they will have support for twice daily injections.

Enoxaparin:

SCI: Enoxaparin SC, 30 mg twice a day

Pelvic Fractures: Enoxaparin SC, 40 mg once a day

Complex Long Bone Fractures of Lower Extremities: Enoxaparin SC, 40 mg once a day

C: Monitoring for enoxaparin:

Platelet count within 1 week of discharge if patient has been on enoxaparin <14 days at discharge to assess for heparin-induced thrombocytopenia.

BMP two weeks after discharge if patient has any history of renal impairment.

Note: Coagulation monitoring (e.g. PTT, Anti-Xa levels) is **not** recommended

D: Contraindications to enoxaparin:

Contraindications to enoxaparin will have been considered during the patient's hospital course and should be reviewed at discharge as well, and include:

- Familial bleeding disorder
- Thrombocytopenia (Platelets <100,000)
- Severe renal impairment (CrCl <30mL/min)
- History of heparin induced thrombocytopenia
- High likelihood of noncompliance
- Unsuitable home environment to support self-management



For patients who have contraindications to enoxaparin or choose not to use enoxaparin after risks and benefits are explained, consider aspirin 160 mg PO daily.

The reason for alternative therapy to enoxaparin should be documented in the patient’s medical record.

Spinal cord injury patients who have contraindications to enoxaparin or choose not to use enoxaparin should be treated with dose-adjusted Coumadin therapy with target INR between 2.0 and 3.0.

NOTE:

· Anticoagulation medications should be given until adequate mobility (WBAT bilateral lower extremities) is regained.

Spinal cord injury patients should be treated for **3 months**.

· If patient has a contraindication to anticoagulation, consider inferior vena cava filter placement if risk of PE is considered to be extremely high. **See appendix.**

References:

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Gould MK, Garcia DA, Wren SM et al. Prevention of VTE in Nonorthopedic Surgical Patients: Antithrombotic Therapy and Prevention of Thrombosis, 9th ed: American College of Chest Physicians Evidence-Based Clinical Practice Guidelines. Chest 2012; 141; e227S-277S.

Pulmonary Embolism Prevention (PEP) Trial Collaborative Group. Prevention of pulmonary embolism and deep vein thrombosis with low dose aspirin: Pulmonary Embolism Prevention (PEP) Trial. Lancet 2000; 355: 1295-302.

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Appendix:

Consideration of IVC filter for very high risk patients. Very High Risk patients include: SCI; greater than 3 long bone fractures; severe pelvic fracture (post elements) & long bone fracture (upper or lower); AIS (head and neck) greater than or equal to 3 & long bone fracture (upper or lower).

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Committee(s) Approval and Date:

Trauma Medical Director Approval:

Signature

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Posted by Trauma Program Manager:

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