

Protocol and Management Guidelines for PE/DVT Prophylaxis

- I. Purpose**

To prevent pulmonary embolism and deep vein thrombosis in trauma patients
- II. Risk factors**
 - A. Age > 40
 - B. ISS > 9
 - C. Blood transfusion
 - D. Surgical procedure within 72 hours
 - E. Lower extremity fracture
 - F. Pelvic fracture
 - G. Immobilization
 - H. PMH of DVT/PE
 - I. Malignancy
 - J. Extensive soft tissue trauma
- III. High risk factors**
 - A. Age > 50
 - B. ISS > 16
 - C. AIS \geq 3 (any body region)
 - D. GCS < 9
 - E. Pelvic fracture and long bone fracture
 - F. Venous injury
- IV. Very High Risk Factors**
 - A. Spinal Cord Injury
 - B. AIS (head and neck) \geq 3 & long bone fracture (upper or lower)
 - C. Severe pelvic fracture (post elements), and long bone fracture (upper or lower)
 - D. Multiple (\geq 3) long bone fractures
- V. Physical Exam Findings**
 - A. Pulmonary Embolism- tachycardia, tachypnea, MS changes, diaphoresis
 - B. Deep Vein Thrombosis- extremity pain, fever, localized edema/swelling, warmth/erythema
- VI. Lab and Radiology Findings**
 - A. Blood gas – respiratory alkalosis, hypoxemia
 - B. CXR – nonspecific, ? peripheral wedge defect
 - C. Extremity Duplex – occlusive/non-occlusive thrombosis
 - D. CT angio Chest – filling defect(s)

VII. PE/DVT Prophylaxis

- A. All trauma patients, unless otherwise specified, should receive PE/DVT prophylaxis (Lovenox 30mg SQ q12h)
- B. Lovenox will be initiated on patients with intra-cranial hemorrhage, s/p craniotomy or ICP monitor, s/p spine ORIF, spine injury with notable hemorrhage, 48 hours after the injury/procedure
- C. Lovenox will be initiated 24 hours following orthopedic procedures, with the exception of major pelvic procedures which will have Lovenox instituted 48 hours post-op. If patient is already receiving Lovenox, dose will be held the night before surgery (at least 12h pre-op).
- D. Lovenox will not be used 24 hours prior to epidural or ICPM/ventriculostomy placement, while the catheter is indwelling, or for 24 hours after removal. Heparin 5000 U Q8 and SCDs may be substituted for Lovenox during the indwelling time.

VIII. IVC Filter Placement

- A. IVC filter placement should be considered for all patients who meet the definition of very high risk as defined under section IV.
- B. As the majority of trauma patients (even those under the “very high risk” category) will only be temporarily considered to be in a hypercoagulable/high risk state, the filter of choice is a removable filter.
- C. Contact Vascular Surgery (pager 831-6374) to co-ordinate placement.

IX. Discharge Instructions for Ortho Patients

- A. LOW RISK:
ECASA 325mg PO BID x 6 weeks
- B. HIGH RISK:
Lovenox 40mg SQ QAM x 3 weeks, then
ECASA 325mg PO BID x 3 weeks