Things to consider when a patient is refusing prophylaxis...

- Have I discussed VTE and potential complications with my patient and his/her family?
- Have I discussed individualized VTE risk factors with my patient?
- Have I told the prescriber that the patient is refusing?
- Have I discussed alternative options with the prescriber (such as medications administered once daily)?

Prophylaxis Contraindications

Pharmacologic	Mechanical
• Active bleeding • Thrombocytopenia (platelets < 50,000) • Hemophilia or other significant bleeding disorder • Glycoprotein IIB/IIIA inhibitors • High risk bleeding procedure • Severe trauma to head/ spinal cord/extremities, with hemorrhage within last 24 hours • Intracranial hemorrhage within the last year • Gastrointestinal/ Genitourinary hemorrhage within last 3 months • Metastasis to the brain from specific cancers or intracranial monitoring device	• Severe peripheral vascular disease (ABPI ≤ 0.5) • Severe heart failure • Compartment syndrome of the affected extremity • Fracture of affected extremity • Local conditions such as: gangrene, recent skin graft, or open wound of the affected extremity • Known acute DVT of the affected extremity* **Not an established contraindication- remains controversial*

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HMS
MICHIGAN HOSPITAL MEDICINE SAFETY CONSORTIUM

10/2012

Preventing Venous Thromboembolism (VTE)
Deep Vein Thrombosis (DVT) & Pulmonary Embolism (PE)

Pharmacologic & Mechanical Prophylaxis for Hospitalized Patients

Insight
for
Healthcare Professionals

VTE: Common, Deadly, Preventable

- Up to 600,000 individuals are affected by DVT/PE each year in the United States
- ≈ 100,000 Americans die each year due to VTE
- PE is the leading cause of preventable hospital death
- Sudden death is the first symptom in 25% of people who have a PE
- One-third of people with VTE will have recurrence within 10 years

Pharmacologic prophylaxis reduces the incidence of VTE by 50 to 65%

Most hospitalized patients have at least one risk factor for VTE*

- Age
- Active cancer
- Clotting disorder
- Recent trauma
- Recent surgery
- Myocardial infarction
- Stroke
- Acute infection
- Reduced mobility
- Heart failure
- Obesity
- Prior DVT/PE
- Family history of VTE
- Respiratory failure
- Hormonal medication
- Rheumatologic disease

*abbreviated list of VTE risk factors

Pharmacologic Prophylaxis

Acceptable Pharmacologic Prophylaxis
Heparin 5,000 Units BID
Heparin 5,000 Units TID
Enoxaparin (Lovenox®) 40mg Daily
Enoxaparin (Lovenox®) 30mg Daily (CrCl<30)
Enoxaparin (Lovenox®) 30mg BID
Dalteparin (Fragmin®) 5,000 Units Daily
Fondaparinux (Arixtra®) 2.5mg Daily

- No evidence supports one pharmacologic agent over another in the medical population
- Choice of agent should be based on patient preference, compliance, ease of administration, and local factors (i.e. acquisition, cost)
- Bleeding secondary to pharmacologic prophylaxis is rare
- Heparin-Induced Thrombocytopenia (HIT) is a rare event, with an estimated incidence of 1-5%

Mechanical Prophylaxis

- Advantageous for patients at risk for VTE, but who are bleeding or at risk for bleeding
- May be used as an add-on therapy to pharmacologic prophylaxis in patients at very high risk (especially among surgical patients)

Mechanical Devices

- Intermittent pneumatic compression
  i.e. sequential compression devices (SCD)
- Graduated compression stockings
- Venous foot pumps

- Nurses hold a vital role in ensuring proper use of mechanical devices. The nurse should verify:
  1) Correct size stockings are selected
  2) Stockings are applied appropriately
  3) Stockings are worn all the time while the patient is in the bed or chair

SCDs do not prevent VTE while hanging on the end of the bed.

References

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