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)?

Pharmacologic & Mechanical Prophylaxis for Hospitalized Patients

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

Prophylaxis Contraindications

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

10/2012
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

<table>
<thead>
<tr>
<th>Heparin 5,000 Units BID</th>
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<tbody>
<tr>
<td>Heparin 5,000 Units TID</td>
</tr>
<tr>
<td>Enoxaparin (Lovenox®) 40mg Daily</td>
</tr>
<tr>
<td>Enoxaparin (Lovenox®) 30mg Daily (CrCl&lt;30)</td>
</tr>
<tr>
<td>Enoxaparin (Lovenox®) 30mg BID</td>
</tr>
<tr>
<td>Dalteparin (Fragmin®) 5,000 Units Daily</td>
</tr>
<tr>
<td>Fondaparinux (Arixtra®) 2.5mg Daily</td>
</tr>
</tbody>
</table>

- 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

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

References