Initial Emergency Department Management of Venous Thromboembolism

This guideline was created in collaboration between the Departments of Emergency Medicine, Internal Medicine and Family Medicine and the inpatient anticoagulation pharmacy. It is intended to provide guidance for the management of venous thromboembolism (VTE) and to help identify patients who may be candidates for observation in the emergency department to allow for rapid coordination of care and expedited discharge.

This is an evidence-based protocol. It is not intended to replace clinical judgment.

VTE observation eligibility criteria:
1. Age ≥ 18 years
2. Adequate renal function (CrCl >30 ml/min)
3. No other indication for hospitalization
4. No baseline coagulopathy (INR >1.5, aPTT > 40 sec, Platelet count < 50K)
5. Does not meet criteria for thrombolysis
6. No massive DVT (severe pain, swelling of entire limb, limb ischemia, acrocyanosis)
7. For PE patients, sPESI score is 0
8. Not pregnant
9. No recent or active bleed (w/in last 3 months)
10. No recent surgery (w/in last 4 weeks)
11. No history of HIT

SIMPLIFIED PE SEVERITY INDEX (PESI)

<table>
<thead>
<tr>
<th>VARIABLE</th>
<th>POINT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age &gt; 80 years</td>
<td>1</td>
</tr>
<tr>
<td>History of cancer</td>
<td>1</td>
</tr>
<tr>
<td>Chronic cardiopulmonary disease</td>
<td>1</td>
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<tr>
<td>Pulse ≥ 110 beats/min</td>
<td>1</td>
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<tr>
<td>Systolic blood pressure &lt;100mmHg</td>
<td>1</td>
</tr>
<tr>
<td>Arterial oxyhemoglobin saturation level &lt;90%</td>
<td>1</td>
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</tbody>
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Score of ≥1 = high risk of 30-day mortality
Score of 0 = low risk of 30-day mortality

DVT only pathway:

Confirmed DVT in Patient ≥ 18

Also have PE?

Yes

Evidence of massive DVT?*

No

Check VTE obs eligibility criteria

No exclusions

Admit to VTE obs and start Lovenox. Consult antithrombosis pharmacy 264-6970.

Other social barriers to outpatient management (e.g. homelessness)?

No

Yes

Meets exclusion

* severe pain, swelling of entire limb, limb ischemia, acrocyanosis

* Antithrombosis pharmacy is available 0700-1730 daily to help ED providers with selection of discharge anticoagulation based on patient factors and insurance and will work with the discharge pharmacy to provide initial take home dosing of anticoagulant. Along with case management they can help providers confirm outpatient follow up plan (PCP vs. Anticoagulation clinic).
Details and definitions:

Massive PE: SBP ≤ 90 with either right heart dysfunction on imaging OR presumed PE on history.

Submassive PE: SBP > 90 and right heart strain on imaging with positive troponin I or BNP > 500.

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