Cutaneous findings in patients on Anticoagulants

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Disclosure Information

• I have no financial relationships to disclose
Objectives

1) Identify underlying causes of actinic or senile purpura
2) Recognize coumadin skin necrosis and understand proper treatment
3) Recognize heparin skin necrosis and understand that underlying HIT is often present
Actinic (Senile) Purpura

- Common on forearms of elderly individuals
- Most important factor is chronic sun exposure
  - Thins dermal collagen and blood vessel walls
- Anticoagulants may exacerbate but are rarely the main culprit
Actinic Purpura
Actinic Purpura
Leukocytoclasitic Vasculitis

• Don’t mistake LCV for actinic purpura
Ecchymoses

- No topical agents have been shown to speed resorption of RBCs and hemosiderin
- Pulsed-dye Laser can help
Coumadin Induced Skin Necrosis

• Coumadin: Occurs between 3-5 days after initiating therapy
  – Due to transient protein C deficiency
  – Increased risk with intrinsic protein C deficiency
  – Occurs in areas with significant adipose tissue
  – Treatment: Heparinize and continue coumadin

<table>
<thead>
<tr>
<th>Protein</th>
<th>Effect</th>
<th>t1/2 (hours)</th>
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<tbody>
<tr>
<td>II</td>
<td>Clotting factor</td>
<td>42-72</td>
</tr>
<tr>
<td>X</td>
<td>Clotting factor</td>
<td>27-48</td>
</tr>
<tr>
<td>IX</td>
<td>Clotting factor</td>
<td>21-30</td>
</tr>
<tr>
<td>VII</td>
<td>Clotting factor</td>
<td>4-6</td>
</tr>
<tr>
<td>S</td>
<td>Anticoagulant</td>
<td>60</td>
</tr>
<tr>
<td>C</td>
<td>Anticoagulant</td>
<td>9</td>
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Coumadin Induced Skin Necrosis
Other Coumadin Skin Reactions

• Extremely rare cause of morbilliform drug rash
• Can cause leukocytoclastic vasculitis
  – Can occur weeks to months after starting medication
Photo of Morbilliform CADR
Leukocytoclastic Vasculitis
Heparin Induced Skin Necrosis

• Heparin: Occurs 1-14 days after starting
  – Often starts at injection site and spreads
  – Due to HIT Type II (Thrombocytopenia will be present)
Heparin Induced Skin Necrosis
Heparin Induced Skin Necrosis

Treatment

• Stop heparin
• Dabigatran and other direct oral anticoagulants may help
• Can perform intradermal testing to see if cross reactivity with LMWH
  – Approximately 50% cross reactivity
Other Heparin Skin Reactions

• Rare cause of maculopapular drug rash
• Type I hypersensitivity
  – Within first 5 days of treatment
• Type III Arthus reaction
  – Leukocytoclastic vasculitis
Anticoagulant Induced Cholesterol Embolization

- Occurs 4-8 weeks after starting anticoagulation (usually coumadin)
- Can cause slow dissolution of clot overlying a cholesterol plaque and allow emboli
- Leads to distal extremity necrotic ulcerations or livedo reticularis
- Watch for renal compromise and GI hemorrhage
- Treatment is supportive and individualized
Cholesterol Embolization
Thrombin and Factor Xa Inhibitors

- Increased bruising
- Very low rate of allergy
- No drug specific cutaneous side effects
Anticoagulation for Cutaneous Surgery

- Extensive dermatologic literature suggesting risk of taking patients off of anticoagulants far outweighs the increased risk of bleeding from cutaneous surgery
- For extensive procedures we may check to make sure INR is not supratherapeutic
Thank you