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Jointly provided by the Annenberg Center for Health Sciences at Eisenhower and Gastroenterology and Hepatology Advanced Practice Providers.
IBD Anticoagulation:
Risk Factors for DVT/PE

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Disclosures

Elisabeth Evans, FNP–BC
Employee: Exact Sciences Corporation

• Medical Science Liaison
• CRC Screening Business Unit
Case Study

• Natalie a 22-year-old female with history of ulcerative colitis (pancolitis) recently hospitalized for flare. Treated with IV solumedrol and Infliximab 5 mg/kg.

• Flex sig after 3rd Infliximab infusion shows mild inflammation – much improved.

• Presents for follow up in clinic. Pt mentions left calf pain and red patch on skin.

• What questions do we ask?
A Deeper Dive into Patient History:

1. Smoking history? She recently began smoking cigarettes to help her ulcerative colitis

2. Medications? Taking OCP (levonorgestrel 0.150mg and ethinyl estradiol 0.030mg)

What do you suspect is the cause of her leg pain and redness?
Deep Vein Thrombosis

• IBD patients have a risk of VTE that is 2- to 3-fold greater than that of the general population.
• This risk is higher during disease flares, both for inpatients and outpatients.
DVT

- DVT occurs when a blood clot forms in one of the large veins, usually in the legs, leading to either partially or completely blocked circulation.

- If left untreated, this clot has the potential to move into the lungs and produce a pulmonary embolism.
  - The classic signs of DVT, especially if it occurs in the lower extremities, are leg pain, swelling, tenderness, and redness or discoloration of the skin.
  - Typical symptoms of a pulmonary embolism are: shortness of breath, rapid pulse, sweating, sharp chest pain that worsens with deep breathing, low blood pressure, unconsciousness and coughing up blood.
## Risk Factors for VTE in IBD Patients

<table>
<thead>
<tr>
<th>Risk factor</th>
<th>Prevention/treatment modality</th>
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<tbody>
<tr>
<td>Active disease (&quot;inflammatory burden&quot;)</td>
<td>Effective anti-inflammatory treatment</td>
</tr>
<tr>
<td>Smoking</td>
<td>Referral for smoking cessation</td>
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<tr>
<td>Oral contraceptive use</td>
<td>Advise alternative methods of contraception (progesterone only)</td>
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<tr>
<td>Hyperhomocysteinaemia</td>
<td>Assess the presence of vitamin deficiency (vitamins B6 and B12 and folic acid) and correct if necessary</td>
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<tr>
<td>Dehydration</td>
<td>Provide adequate hydration</td>
</tr>
<tr>
<td>Hospitalization / immobilization</td>
<td>Early mobilization, especially after surgery; graduated compression stockings or pneumatic devices. Medications.</td>
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<tr>
<td>Infections</td>
<td>Timely diagnosis and treatment of infections</td>
</tr>
<tr>
<td>Indwelling catheters</td>
<td>Limit the use of venous catheters; when possible, administer oral and enteral nutrition</td>
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<tr>
<td>Obesity</td>
<td>Encourage weight loss (diet, exercise)</td>
</tr>
<tr>
<td>Long-distance travel</td>
<td>Frequent ambulation, exercise, hydration, compression stockings</td>
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</tbody>
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Thromboembolism With IBD: Mayo Clinic Rochester Experience

UC Extent (n=59)
- Pancolitis (76%)
- Left-Sided (22%)

CD Extent (n=39)
- Ileocolonic (56%)
- Colonic (23%)
- Ileal (21%)
Thromboembolism With IBD: Mayo Clinic Rochester Experience

Thrombophilia Abnormality

- Any thrombophilia: 30%
- Activated protein C resistance: 22%
- Factor V Leiden: 19%
- Hyperhomocysteinemia: 14%
- Antiphospholipid Ab: 7%
- Protein S deficiency: 5%
- Dysfibrinogenemia: 5%
- Prothrombin 20210 mutation: 4%
- Lupus anticoagulant: 0%
- Protein C deficiency: 0%
- Antithrombin III deficiency: 0%
Thromboembolism With IBD: Mayo Clinic Rochester Experience

Risk Factors for DVT/PE

- Immobility/hospitalizations: 60%
- Prior known DVT/PE: 20%
- Malignancy: 15%
- Recent surgery: 10%
- Central line-related: 5%
- Estrogen replacement therapy: 2.5%
- Family history: 2.5%
- Recent trauma/fracture: 2.5%
- Oral Contraceptives: 10%
How to Screen People for Risk of DVT

Illinois State Medical Society

Are You at Risk for DVT?
FOR PATIENTS
Complete this risk assessment tool to find out.

Add up all your points to get your total Caprini DVT Risk Score
Risk scores indicate your odds of developing a DVT during major surgery/hospitalization.
Score 0-2 DVT risk is small.

Caprini Risk Assessment Model

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Patient Follow-Up

- Natalie was sent to ED from clinic and managed by hematology
  - D-dimer, duplex ultrasound, IV heparin then enoxaparin then PO for 3 months.
- Tight management of IBD (may add labs, stool test, flex sig)
- Referred for smoking cessation
- Changed OCP
  - Options include: progestin OCP, progestin injection, progestin implant, progestin IUD. Need to monitor for bone loss q 2 years; Copper IUD
Conclusions

• DVT and PE occur more frequently in IBD patients
  – Patients with chest pain need immediate evaluation, even if they are younger, female, good health, etc.
  – Increased risk likely due to increased inflammation
  – No one specific thrombophilia is increased
  – Hospitalized patients should be on VTE prophylaxis for 30 days post op