EMRAP Mailbag

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Mailbag Question: I have run into several cases concerning for DVT's and PE's in patients already on DOAC's. There seems to be a lot of practice variation for these patients. Some physicians I know don't work them up because they're "already on treatment." Others just obtain imaging because the d-Dimer isn't validated with DOAC use. Still more confusing is what to do if you find one. Switch them to Lovenox? Could you do a piece on an approach to the diagnosis and treatment of suspected failed anticoagulant use?

- Expert: Tom DeLoughery consulted to answer the question.
- Breakthrough venous thromboembolism (VTE) is rare: ~ 2-3% over span of 3-6 months.
- Higher risk for breakthrough: Patients with active cancer, severe antiphospholipid antibody syndrome.
- Leg swelling/pain can be recurrent in those with large DVTs.
    - Post-thrombotic syndrome is not uncommon.
    - Performing lower extremity US looking for acute DVT is a reasonable step.
- Post-PE Syndrome
    - Chronic shortness of breath, chest pain, decrease in exertional tolerance.
    - Up to 50% of patients will experience this at 6 months.
    - Important to ask if symptoms are chronic or are significantly worse than baseline.
    - Tom does recommend a d-Dimer in this situation: A negative d-Dimer would make an acute clot highly unlikely.

- What causes breakthrough VTE: Cancer, vasculitis most common.
- Questions to ask when considering a breakthrough clot:
  - Is it really a breakthrough?
    - Patient with DVT at increased risk of PE for 1st 1-2 weeks on anticoagulation. This would not be considered a breakthrough.
    - In 1st couple weeks of therapy, 10-30% of patients will experience extension of DVT (not a breakthrough or failure of treatment).
    - Patient compliance issues
      - Factor Xa levels won't be resulted in real time.
      - Dosing issues: make sure the patient is on the correct dose.
      - If patient on warfarin, look at trends in INR (may not always be therapeutic).
  - Should the patient be on a DOAC?
    - Patients with mechanical valves should be on warfarin therapy.
  - Treatment of breakthrough
    - Best option is to change patient to therapeutic dosing of low-molecular weight heparin and arrange for prompt evaluation/follow up with hematology.
    - If breakthrough while on LMWH, can increase dose by 25%.