Recurrent venous thromboembolism following paper wasp bite in an adult male

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Introduction

- “Provoked” DVTs are rare and seen in only 10% of cases and can direct management.
- Provoked DVTs can be treated with anticoagulation for 3-6 months as compared to indefinite anticoagulation for unprovoked events.

Case Presentation

- A 56-year-old male smoker with no family history of coagulation disorders presented to the emergency department with 1 week of right calf pain and swelling and 1 day of shortness of breath with pleuritic chest pain.
- He was bit by a paper wasp (Polistes spp) 3 weeks ago while camping in a local forest in Scranton, Pennsylvania.
- Similar symptomatic presentation 1 year ago when he was bit by a wasp from the same nest and treated for 6 months with apixaban for VTE.

Clinical features

- BP: 124/96 mmHg; PR 72/min; SpO2 96%; temp 97F.
- Physical exam: Right calf erythema, positive Homans’s sign and normal cardiopulmonary findings.

Workup

- Labs: Hb 15 g/dL, WBC count 7,360 cells/mm3, platelets 227
- Renal and liver function unremarkable.
- D-dimer: 3.22 ug/mL; coagulation panel neg in the past.
- Imaging and ECG: see figure
- Transthoracic echocardiography was remarkable for LVEF 55-60%
  Absent right heart strain.

Discussion

- Duration of therapy for PE depends on risk factors, provoking events and bleeding risk.
- Recurrent provoked events are rare; causes include surgery, underlying malignancy and immobilization.
- Wasp bites have been associated with ischemic stroke, arterial thrombosis and myocardial infarction and rare venous thrombosis.
- Proposed mechanisms are direct vascular toxicity, leukotriene and thromboxane in venom causing platelet aggregation, IgE-mediated mast cell activation and inflammatory mediator release ¹,²

Conclusion

Recognition and avoidance of rare environmental factor (wasp bite) via thorough history taking in this patient with recurrent DVT and PE with no risk factors or prothrombotic disorders significantly reduced length of anticoagulation therapy and associated bleeding risk.

References