Superficial Thrombophlebitis - think deep!

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Aim
There is a paucity of evidence on how to manage superficial thrombophlebitis (ST). We present a case of ST complicated by pulmonary emboli (PE) and review the evidence.

Case Report
An 84-year-old female presented with a two week history of a swollen right leg and increased shortness of breath. She had no risk factors for venous thromboembolism (VTE). On examination, the right calf was tender and 4cm wider than the left calf. Her respiratory rate was 15 per minute and her chest was clear, with oxygen saturations of 95% on room air.

Investigations: D-dimer (as part of a DVT work up) was elevated at 4,343 ng/mL.

![US doppler = superficial thrombophlebitis](image1.jpg)
Figure 1: Ultrasound doppler of right lower limb showing a non-compressible superficial vein (arrow) with some echo-genic intraluminal material

![Chest xray = prominent left hilum](image2.jpg)
Figure 2: CXR showing a prominent left hilum

![CT pulmonary angiogram = multiple PEs with evidence of right heart strain](image3.jpg)
Figure 3: CT pulmonary angiogram showing a local filling defect within the left upper lobe pulmonary artery (arrow)

![CT pulmonary angiogram showing a local filling defect in a segmental branch in the left lower lobe (arrow)](image4.jpg)
Figure 4: CT pulmonary angiogram showing a local filling defect in a segmental branch in the left lower lobe (arrow)

![CT pulmonary angiogram showing enlargement of right sided cardiac chambers in keeping with right heart strain. Note is also made of some consolidation in the basal right lower lobe in keeping with a pulmonary infect (arrow).](image5.jpg)
Figure 5: CT pulmonary angiogram showing enlargement of right sided cardiac chambers in keeping with right heart strain. Note is also made of some consolidation in the basal right lower lobe in keeping with a pulmonary infect (arrow).

Management: She was treated with low molecular weight heparin and warfarin was introduced. A subsequent echocardiogram was normal.

Results
- Literature review quoted an unexpectedly high incidence of VTE from ST, between 11 - 57%
- The risk is increased if:
  1) The ST extends close to the saphenofemoral junction
  2) There are no varicose veins
  or, 3) Risk factors are shared with those for venous thromboembolism
- It is suggested that treatment with low molecular weight heparin (LMWH) can reduce the risk of VTE by 85%, with prophylactic dosing as effective as treatment dose.
- A disadvantage is the increased bleeding risk and there is also the question of the cost-effectiveness of this approach.

Conclusions
- Superficial thrombophlebitis (ST) should not be dismissed as a benign and self-limiting disease
- Patients should have a comprehensive assessment with a detailed history and examination
- In those presenting clinically - an US doppler should always be performed
- In those patients with ST extending close to the saphenofemoral junction, with no varicose veins, treatment with low molecular weight heparin can both alleviate symptoms and reduce the risk of developing a VTE

References

Written consent for this case report and photographic images has been obtained and, where possible, anonymised.

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