

81. Superficial thrombophlebitis

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Q1: "The superficial clots I currently have cause a lot of pain and tenderness over the area of the affected veins. It hurts for something as light as the sheet to touch it, but it really didn't swell, get hot to the touch, or turn colors. But when I am in the shower I notice it is red in the area where the main clots are".

A1: The localized nature of the symptoms (tenderness, pain, and redness) and the exquisite tenderness to touch are classic for a superficial thrombophlebitis. Symptoms of the more dangerous deep vein thrombosis are typically more diffuse.

Q2: "I had back surgery and one week later my leg felt crampy and was a little blue. It wasn't swollen too bad. The ultrasound showed a superficial clot. The doc said they ignore those, so he sent me home on a baby aspirin a day. Well, the next few months the leg got more and more blue. It got more and more swollen. I had to use a cane to walk to the bathroom, it hurt so bad. My doctor, whom I kept calling and going to see, kept insisting there was no clot "'cause the Doppler didn't show one". He never sent me for another one. Then my thigh felt like someone was stabbing it with a knife every time I put any weight on it. That night the clot broke and went to my lung...."

A2: With leg symptoms such as the ones in this patient it is appropriate to obtain a Doppler ultrasound, as was done in this patient, to make sure symptoms are not due to a deep vein thrombosis (DVT). Since only a superficial thrombophlebitis was found in this patient treatment with the anti-inflammatory drug aspirin was chosen. However, one would have expected symptom improvement over 7-14 days. In a patient with superficial thrombophlebitis in whom symptoms do not improve or even worsen one should consider a repeat Doppler ultrasound, since superficial clots can progress in some patients into the deep veins, causing a DVT. Since DVT can lead to pulmonary embolism, as it did in this patient, treatment with blood thinners are indicated once DVT is present.

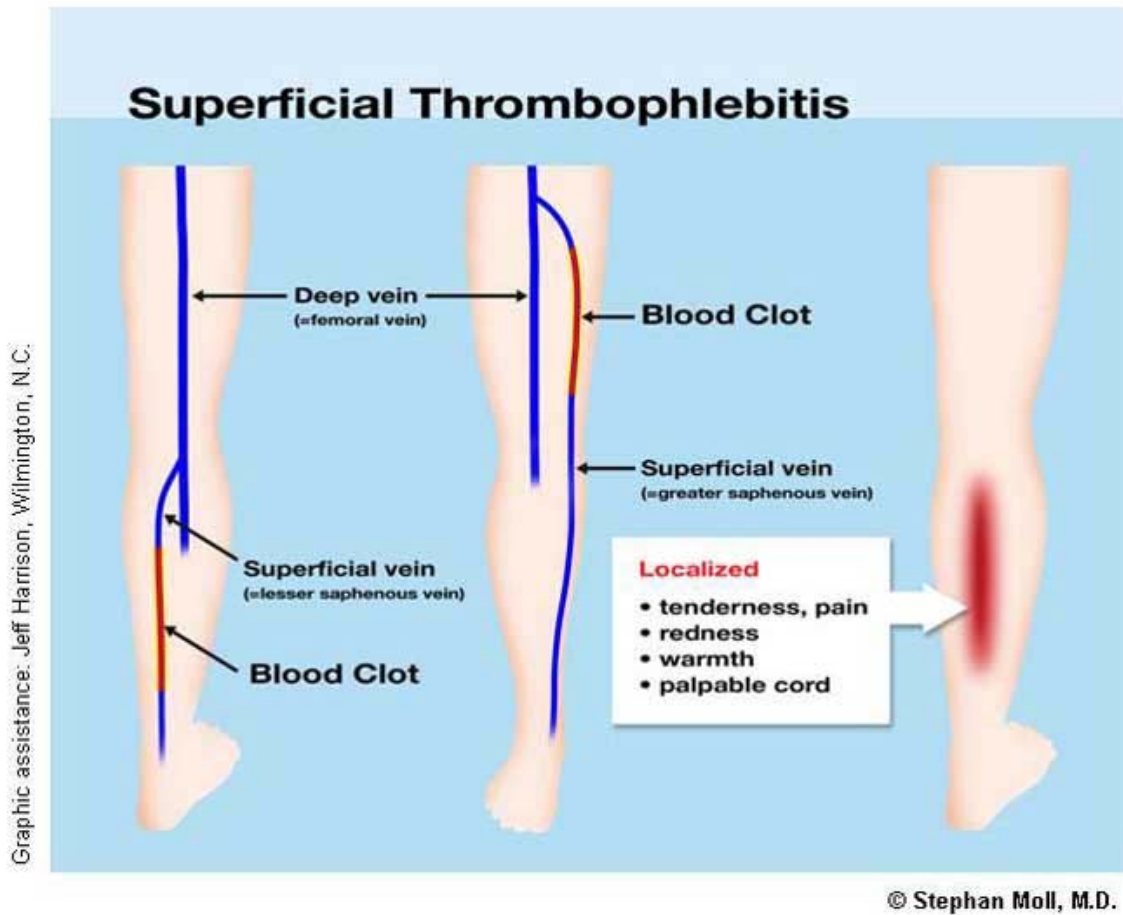
Q3: "I'm no doctor but warfarin for life for a superficial clot seems a worse remedy than the problem."

A3: Superficial clots are typically not treated with warfarin. And if blood thinners are chosen, they are usually only given for a short period of time, such as 2-6 weeks.

Q4: "Here is a really stupid question for anyone who can answer it: Is superficial phlebitis the same as post-phloebtic syndrome (I hope I spelt it right)?"

A4: Superficial phlebitis (also called superficial thrombophlebitis) is something completely different to "postthrombotic syndrome". The latter is explained in [Q/A 82](#).

Vein Anatomy: Superficial veins are vessels in the soft tissues underneath the skin. In many people they are easy to see on the back of the hands and feet and the forearms; they typically can not be seen in the legs. They drain the skin and fat tissue and then eventually join the deep veins in legs and arms to lead the blood back to the heart. The deep veins can not be seen. When a clot forms in superficial veins they get irritated and inflamed (See figure). This is called "superficial thrombophlebitis" ("thrombus" means clot, "phlebitis" means inflammation of the vein). Clots in the deep veins are referred to as DVT (= deep vein thrombosis).



Risk factors for superficial blood clots are:

- localized trauma
 - intravenous catheters
 - varicose veins
 - hormone therapy (birth control pills, hormone replacement therapy)
 - pregnancy or postpartum state
 - obesity
 - smoking (possible risk factor)
 - surgery
 - clotting disorders (such a factor V Leiden, prothrombin 20210 mutation, antiphospholipid antibodies, etc.)
- Sometimes no explanation is found why they occur.

They typically occur in the legs, but may also occur in the arms, typically at sites where a vein was stuck for a blood draw or where a peripheral venous catheter had been inserted. Symptoms are typically localized and overlie the involved vein (See figure above). If superficial clots happen in varicose veins and occur repeatedly it may be worthwhile to consider varicose vein removal ("stripping").

The classic symptoms of superficial thrombophlebitis are:

- localized tenderness or pain along the course of a superficial vein (see figure), often exquisitely painful,
- localized redness along the course of the superficial vein,
- localized warmth along the course of the superficial vein,
- possibly localized swelling along the course of the superficial vein, but not diffuse or generalized ankle or calf swelling,
- palpable cord (= clotted vein).

Superficial thrombophlebitis can be very uncomfortable, but is typically not dangerous, since clots do not typically break off to travel to the lung. Also, the symptoms typically disappear spontaneously over a period of 10-14 days. Deep vein thrombosis (DVT), on the other hand, can be dangerous since clots may break off and travel to the lung to cause a pulmonary embolism.

A clear differentiating factor between a superficial thrombophlebitis and a deep vein thrombosis (DVT) is the fact that symptoms (pain, swelling, discoloration) of a superficial clot are typically localized, whereas those of deep vein thrombosis are often diffuse; also, a clot in the deep veins is not palpable through the skin. However, sometimes it can be difficult to distinguish between a superficial and a deep clot.

Treatment:

Often, the symptoms disappear spontaneously over a period of 10-14 days. Treatment of superficial thrombophlebitis is given to ease the pain. The clot typically dissolves by itself. Therapy consists of (a) leg rest, (b) so-called "non-steroidal" drugs (NSAIDs), i.e. Ibuprofen (Motrin®), Naproxen (Naprosyn®) and similar drugs to decrease inflammation of the vein, (c) heat or cold application for relief of symptoms, (d) elevation of leg if there is a lot of swelling. Blood thinners, such as heparin, low molecular weight heparins (Lovenox®, Fragmin®, Innohep®, etc.) or warfarin (= coumadin®) are typically not needed and not used. However, in two circumstances blood thinners are used: (a) if the superficial clot is extensive and associated with a lot of symptoms and (b) if the clot extends close to or into the deep venous system.

If the symptoms of superficial thrombophlebitis do not improve over 1-2 weeks or if they worsen, it may be appropriate to repeat a Doppler ultrasound to see whether the clot has extended into the deep venous system causing a DVT.