

**THROMBOPHLEBITIS: CAUSES, SIGNS AND SYMPTOMS,
COMPLICATION , DIAGNOSIS ,TREATMENT AND PREVENTION.**

**A SEMINAR PRESENTATION
BY**

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SUMMARY.

Thrombophlebitis is an inflammation of the vein due to presence of a blood clot. Thrombophlebitis usually occurs in the veins of the legs. Rarely, it can occur in the veins of the arms or neck. Superficial (on the surface) thrombophlebitis occurs in the visible veins just under the skin. The area of inflammation is usually reddened, tender, and warm to touch and can be painful. The extremities may swell and fever may occur .Pulmonary embolism, a condition that can be fatal, results from a deep vein thrombosis that becomes loose in the veins and travels to the lungs. There, it blocks proper blood flow to the lungs and decreases oxygen levels in the body. Thrombophlebitis can be caused by a blood clot, which can form as a result of ; An injury to the vein, an inherited blood-clotting disorder, and being immobile for long periods, such as during an injury or a hospital stay .Treatment for superficial thrombophlebitis usually includes elevating the leg, warm compresses to the area, medication such as; (ibuprofen) to decrease pain and inflammation. And Anticoagulant drugs such as ;(pradaxa, plavix, Brilinta, Cilostazol,Aggrenox) to prevent or slow down the body's process of making clot. Prevention consists of walking (Especially when it is caused by immobility), drinking fluids of non alcoholic fluid to avoid dehydration. Walking is especially suggested after a long period seated, particularly when one travels. Thrombophlebitis can be diagnosed using; Doppler ultrasound and Blood coagulation studies.

INTRODUCTION

Thrombophlebitis is an inflammation of the vein due to presence of a blood clot. Thrombophlebitis usually occurs in the veins of the legs. Rarely, it can occur in the veins of the arms or neck. Superficial (on the surface) thrombophlebitis occurs in the visible veins just under the skin. The area of inflammation is usually reddened, tender, and warm to the touch and can be painful. The extremities may swell and fever may occur. Swelling of the leg or fever may alert a person to the presence of a Deep vein thrombosis, especially if risk factors for DVT exist. Pulmonary embolism, a condition that can be fatal, results from a DVT that becomes loose in the veins and travels to the lungs. There, it blocks proper blood flow to the lungs and decreases oxygen levels in the body.)

CAUSES

The cause of thrombophlebitis is a blood clot, which can form as a result of:

- An injury to a vein
- An inherited blood-clotting disorder
- Being immobile for long periods, such as during an injury or a hospital stay

RISK FACTORS

The risk of thrombophlebitis includes:

- Prolonged bed rest, or when traveling in a car or plane for a long period.
- Having varicose veins, which are a common cause of superficial thrombophlebitis.
- Pregnancy.
- Use of birth control pills or hormone replacement therapy.
- A family history of a blood-clotting disorder.
- Overweight or Obesity.
- Smoking.
- Stroke.

SIGNS AND SYMPTOMS.

The following symptoms are often associated with thrombophlebitis;

- **The Superficial thrombophlebitis signs and symptoms include:**
- Warmth.
- Tenderness.
- Pain in the affected area.
- Skin redness.
- Edema (ankle and foot).
- **The Deep vein thrombosis signs and symptoms include:**
- Pain.
- Swelling.
- Skin redness.

COMPLICATIONS

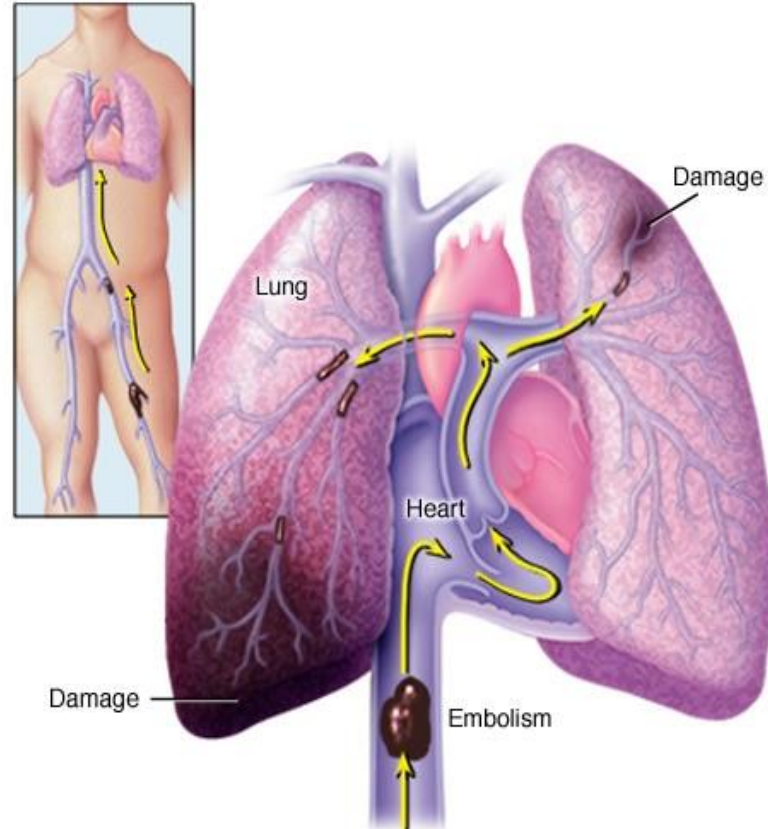


Fig. 1. Pulmonary embolism

- Pulmonary embolism.** This occurs when part of a deep vein clot becomes dislodged, it can travel and travels to the lungs, where it can block an artery (embolism) and become potentially life-threatening

.

- Post-phlebitis syndrome.** This condition, also known as post-thrombotic syndrome, can develop months or even years after one had DVT. Post-phlebitis syndrome can cause lasting and possibly disabling pain, swelling and a feeling of heaviness in the affected leg

TYPES OF THROMBOPHLEBITIS:

1. Superficial thrombophlebitis:

It's a blood clot in the vein just below surface of the skin. It doesn't usually get to the lungs, but superficial thrombophlebitis can be painful.

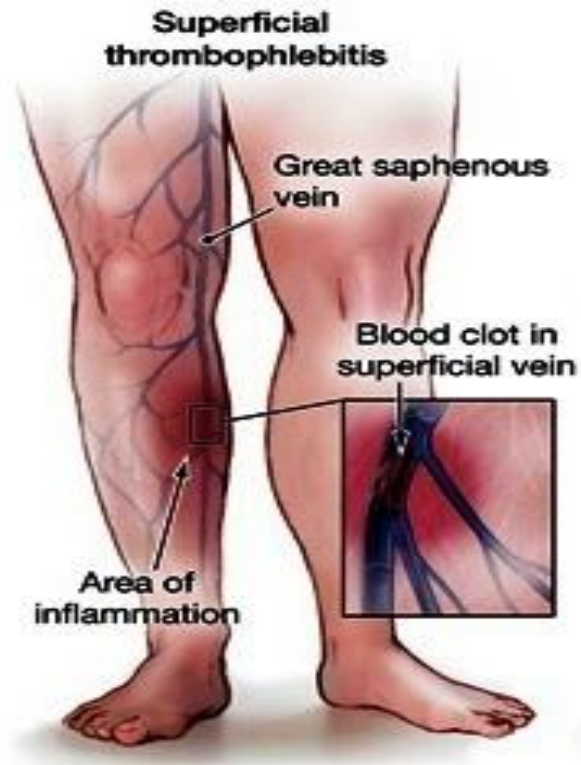


Fig. 2 Superficial Thrombophlebitis.

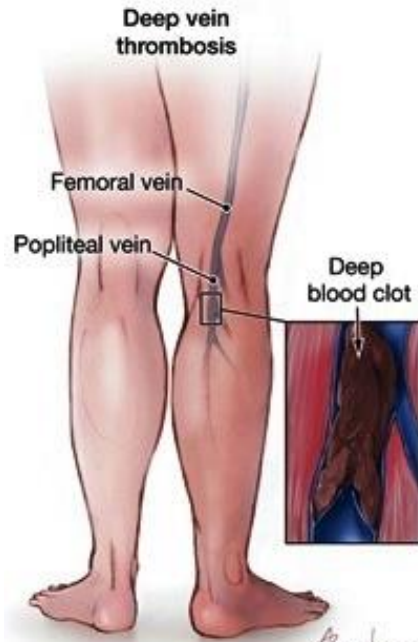


Fig. 3A Deep vein thrombosis

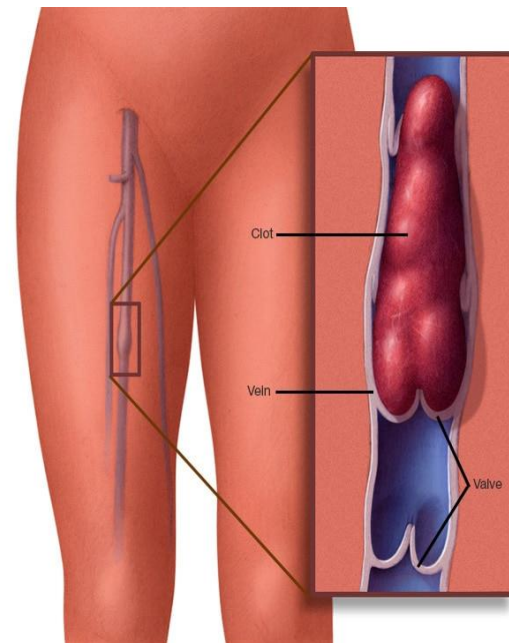


Fig. 3B Deep vein thrombosis

2: Deep vein thrombosis (DVT): It's a blood clot in a deep vein. It usually happen in ones lower leg or thigh, such clot can get loose and travel through the bloodstream. If it gets to an artery in the lungs and blocks blood flow, it's called a pulmonary embolism.

3: Migratory thrombophlebitis: Also called Trousseau syndrome or thrombophlebitis migrants, clot moves around the body, often from one leg to other. It's often linked to an underlying cancer, especially of the pancreas or lung.

DIAGNOSIS

The diagnosis for thrombophlebitis is primarily based on the appearance of the affected area. Tests will be performed to determine the cause, including the following:

- Doppler ultrasound
- Blood coagulation studies.

•**Ultrasound.** A wand like device (transducer) moved over the affected area of the leg sends sound waves into the leg. As the sound waves travel through the leg tissue and reflect back, a computer transforms the waves into a moving image on a video screen. This test can confirm the diagnosis and distinguish between superficial and deep vein thrombosis.

Blood coagulation studies

Blood test. Almost everyone with a blood clot has an elevated blood level of a naturally occurring, clot-dissolving substance called D dimer. It's also useful for ruling out DVT and for identifying people at risk of developing thrombophlebitis repeatedly.

D-dimer plasma test: Plasma D- dimer are specific cross linked derivatives of fibrin, produced when fibrin is degraded by plasmin, its concentration are raised in patients with thrombophlebitis.

TREATMENT

- **Treatment for superficial thrombophlebitis includes:**

- Elevating the leg.
- Warm compresses to the affected area.
- And medication (ibuprofen and diclofenac) to reduce pain and inflammation.
- Support stockings may be worn to reduce swelling.

- **Treatment for Deep vein thrombosis includes:**

- Anticoagulation drugs such as ;Pradaxa, plavix, cilostazol, Aggrenox and Brilinta.
- Treatment with heparin (by injection) such as;Tizaparin, dalteparin, trioxaparin.
- pain killer such as ibuprofen and diclofenac to reduce pain and inflammation.

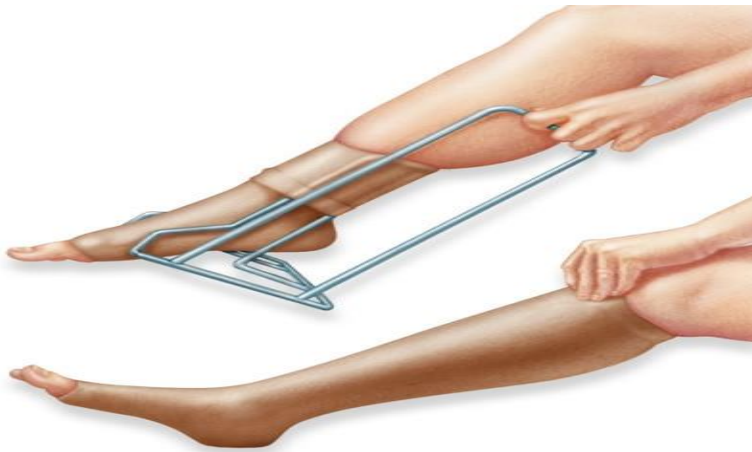


Fig. 4 stocking

PREVENTION

- Prevention consists of walking (Especially when caused by immobility)
- Drinking of non alcoholic fluids to avoid dehydration.
- When travelling on a long distances, always stand and walk around once an hour
- Flexing the ankles, or carefully press the feet against the floor for at least 10 times per hour.
- Wearing of loose clothing's
- Drink plenty of nonalcoholic fluids to avoid dehydration.

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