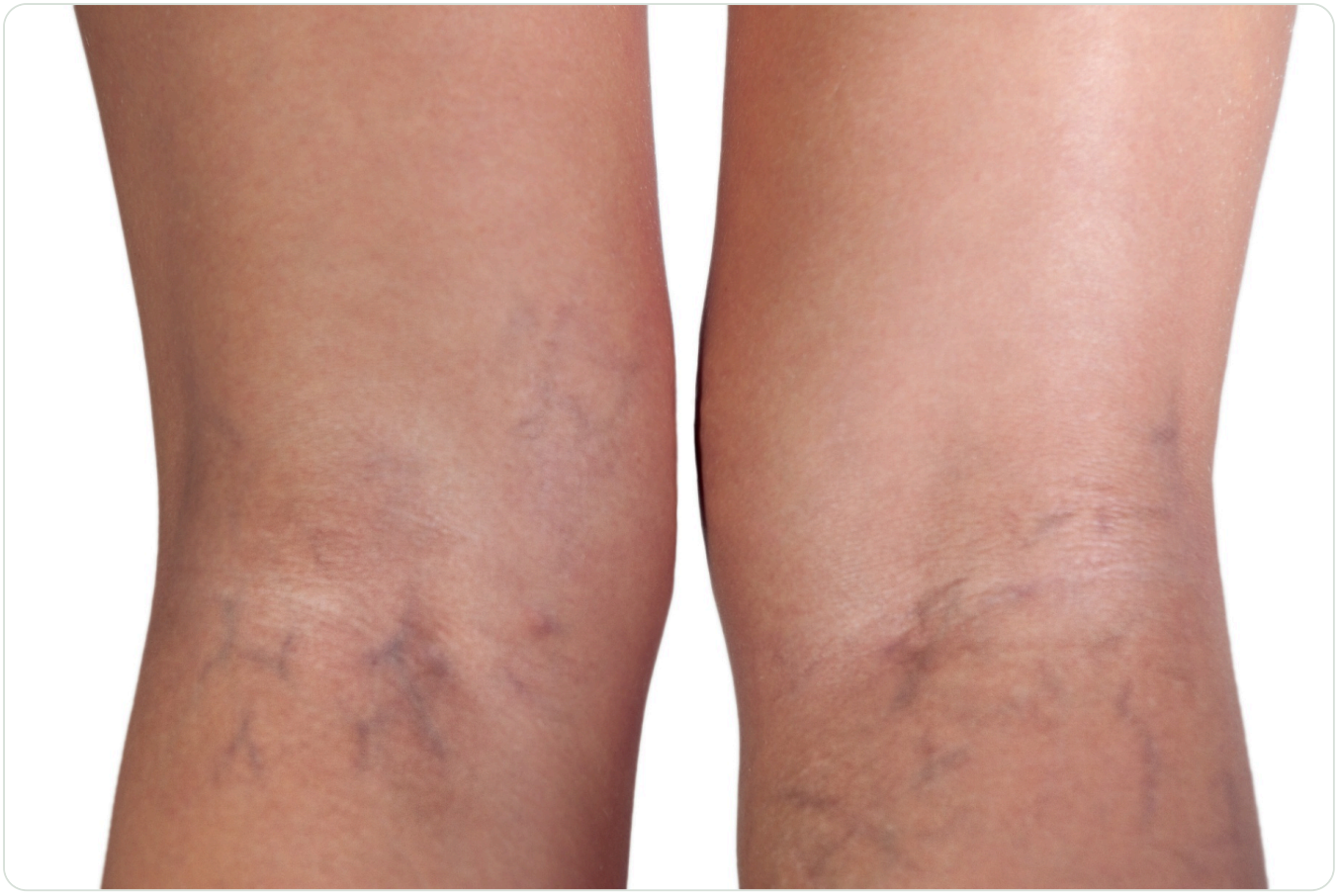
Phlebitis (Thrombophlebitis): Symptoms, Treatment and Link to Varicose Veins



Phlebitis - medically known as **superficial thrombophlebitis** or **superficial vein thrombosis (SVT)** - is an inflammation and blood clot in a superficial vein, most often in the leg. The condition is common in patients with varicose veins - up to **60% of cases occur in an existing varicose vein** [1]. It was previously considered harmless, but recent studies show that up to **25% of patients also have a concurrent deep vein thrombosis (DVT) or pulmonary embolism (PE)** [2].

What is phlebitis?

A tender, red, hard, and warm cord along a superficial vein - most often the great saphenous vein on the inside of the thigh or calf. A blood clot forms in the vein, irritating the vein wall and causing a local inflammatory reaction. Unlike erysipelas (cellulitis), the redness is narrow and linear, not map-like.

Symptoms

- **A tender, hard vein** that can be felt as a cord under the skin
- **Redness** along the vein, often 5-30 cm long
- **Warm skin** over the area
- **Swelling** locally around the vein
- Pain on touch and when walking
- Fever is rare (unlike with erysipelas)
- Often in a known varicose vein

Why is it important?

Previously, textbook wisdom was: "thrombophlebitis is benign - apply warm compresses and take NSAIDs". This is outdated.

The French **POST study** with 844 patients showed [2]:

- **24.9%** had a concurrent DVT or pulmonary embolism (PE) at diagnosis
- **10.2%** developed complications (DVT, PE, recurrence) within 3 months
- The risk is highest when the thrombophlebitis is **> 5 cm long**, **close to the saphenofemoral junction** (in the groin) or the **saphenopopliteal junction** (at the back of the knee)

Therefore, SVT is now considered part of the venous thromboembolism spectrum and requires active treatment.

Investigation

If thrombophlebitis is suspected, a **duplex ultrasound** should always be performed to:

1. Confirm the diagnosis
2. Measure the length of the thrombus
3. Assess the distance to the deep vein system (groin/back of the knee)

4. Rule out a concurrent DVT

Thrombophlebitis located < 3 cm from the deep vein system is treated as a DVT.

Treatment

1. Anticoagulation

- **Fondaparinux 2.5 mg subcutaneously once daily for 45 days** is the first-line treatment for thrombophlebitis ≥ 5 cm (CALISTO study: 85% reduction in thromboembolic complications) [3]
- Alternatively, rivaroxaban 10 mg daily for 45 days (SURPRISE study) [4]
- For short SVT < 5 cm far from the deep system: NSAIDs and compression may be sufficient

2. Compression Class 2 compression stockings significantly reduce pain and swelling.

3. Pain relief NSAIDs (ibuprofen, naproxen) relieve both pain and inflammation. Topical hirudoid or diclofenac gel can be used as a supplement.

4. Mobilisation Stay active - bed rest increases the risk of DVT.

The link with varicose veins

Varicose veins are the most significant risk factor for superficial thrombophlebitis:

- Stagnant blood in the enlarged vein easily forms a clot
- Increased venous pressure damages the endothelium
- 60% of all SVT cases arise in a pre-existing varicose vein [1]
- The risk of recurrence is high if the underlying varicose veins are not treated

The definitive treatment for thrombophlebitis is to treat the varicose veins. After the acute phase (typically after 4-6 weeks), the patient should be offered endovenous laser therapy (EVLT) or another minimally invasive treatment to remove the diseased vein segment and prevent recurrence.

Other causes of thrombophlebitis

- IV cannula or infusion (chemical irritation)
- Cancer (especially pancreatic, lung, gastrointestinal) - Trousseau's syndrome
- Pregnancy and the postpartum period
- Hormone therapy
- Hereditary thrombophilia
- Immobilisation, long-haul flights
- Infection (septic thrombophlebitis - rare, requires IV antibiotics)

When should you see a doctor?

On the same day or urgently:

- A hard, tender cord on the leg with redness
- The phlebitis is spreading upwards
- Simultaneous swelling of the entire leg
- Feeling generally unwell, fever

Call 999:

- Sudden shortness of breath or chest pain (suspected pulmonary embolism)

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Phlebitis is not "just an irritation". It is a blood clot in a superficial vein that requires a duplex ultrasound, often anticoagulation, and follow-up with definitive treatment of the underlying varicose veins to prevent recurrence. At **Kirurgen.dk**, we investigate and offer treatment with endovenous laser therapy, which may be covered by public healthcare funding.

References

1. Decousus H, et al. *Superficial venous thrombosis and venous thromboembolism: a large, prospective epidemiologic study.* Ann Intern Med 2010;152(4):218-24.
2. Decousus H, et al. *Epidemiology, diagnosis, treatment and management of superficial-vein thrombosis of the legs.* Best Pract Res Clin Haematol 2012;25(3):275-84.
3. Decousus H, et al. *Fondaparinux for the treatment of superficial-vein thrombosis in the legs (CALISTO).* N Engl J Med 2010;363(13):1222-32.
4. Beyer-Westendorf J, et al. *Prevention of thromboembolic complications in patients with superficial-vein thrombosis given rivaroxaban or fondaparinux: the open-label, randomised, non-inferiority SURPRISE phase 3b trial.* Lancet Haematol 2017;4(3):e105-e113.