Superficial Thrombophlebitis

Superficial thrombophlebitis is inflammation of a vein just under the skin, usually in the leg. A small blood clot also commonly forms in the vein, but is usually not serious. The condition usually settles and goes within 2-6 weeks. Treatments can ease pain or discomfort. Superficial thrombophlebitis is different to, and much less serious than, deep vein thrombosis (DVT). However, in a small number of cases, complications can occur with superficial thrombophlebitis, including extension of the blood clot further up the vein. If the clot extends to where the superficial and deep, larger veins join, a DVT can develop.

What is thrombophlebitis?

- **Phlebitis** means inflammation of a vein.
- **Thrombo(sis)** means a blood clot in a vein.

A vein is a blood vessel that takes blood towards the heart. If a vein becomes inflamed, a blood clot commonly forms inside the inflamed portion. So, the term thrombophlebitis is used to mean an inflamed vein, with or without a small blood clot inside the vein. Thrombophlebitis is commonly just called phlebitis.

What is superficial thrombophlebitis?

The superficial veins are the ones that you can often see or feel just under the skin. Most bouts of superficial thrombophlebitis occur in a leg vein. However, any superficial vein can be affected. A typical site is in a varicose vein in a leg. Varicose veins are common, particularly in pregnant women. Superficial thrombophlebitis is not usually serious but complications can sometimes occur (see below).

*Note*: this leaflet does not deal with inflammation or thrombosis of deep veins. The deep veins are larger, pass through the muscles in your arms and legs and you cannot see or feel them. Some people get confused between superficial thrombophlebitis and deep vein thrombosis (DVT). They are quite different. A DVT is more serious.

See separate leaflet called Deep Vein Thrombosis for more detail.

What causes superficial thrombophlebitis?

Many cases occur for no apparent reason. A slight injury to the vein may trigger the inflammation in some cases.

**Risk factors**

There are a number of risk factors that make it more likely for inflammation to develop in a vein:

- **Varicose veins** - many cases occur in people who have varicose veins of the legs. Varicose veins are prone to minor injuries which can lead to inflammation.
- **Intravenous injection or cannulation** - sometimes it occurs after having injections into the veins (intravenous injections) or 'drips' (intravenous infusions) in hospital. These are commonly given in hand or arm veins. Such procedures can injure the vein and may trigger inflammation. Damage to the veins in this way is also common in people who inject 'street drugs'.
- **Previous problems with veins** - if someone has had previous superficial thrombophlebitis or a previous DVT, they are more likely to get superficial thrombophlebitis.
Abnormalities of blood clotting factors - various conditions can alter certain chemicals (clotting factors) in the bloodstream, which make the blood clot more easily. These include using the oral contraceptive pill, using hormone replacement therapy, cancer, smoking and pregnancy. There are also some less common hereditary blood disorders where blood clots develop more readily than usual.

Blood flowing more slowly than normal (stasis) - this might occur in veins that are varicose, during long flights or in people who are immobile, and also following major surgery.

What are the symptoms of superficial thrombophlebitis?

Swelling, redness and tenderness along a part of the vein are the usual symptoms. You may develop a high temperature (fever). If a blood clot develops inside the inflamed part of the vein, the vein may then feel hard or knobbly. The blood clot is usually of little concern, as it is small. There are other veins which carry the blood and bypass the blocked vein.

When the inflammation settles, a persistent darker area of skin (hyperpigmentation) may remain over the affected vein. A small firm lump may also persist below the skin. This may be tender to the touch for some time.

Do I need any investigations?

Your doctor is usually able to diagnose superficial thrombophlebitis by talking to you and examining the affected area. Investigations are not usually needed, especially if you have one of the risk factors for superficial thrombophlebitis (see above). However, if your doctor is concerned that you may have a DVT (see below), they may advise that you have some tests to exclude this. This usually means a special ultrasound scan of the affected area to look for any clots in the deep veins.

If you have recurrent bouts of thrombophlebitis, especially if you have no real risk factors for superficial thrombophlebitis, your doctor may suggest some tests to check that you do not have any problems with the clotting of your blood. They may also suggest other tests to look for more rare causes of recurrent superficial thrombophlebitis (see below).

What is the treatment for superficial thrombophlebitis?

Most bouts of superficial thrombophlebitis last for 3-4 weeks. If they are associated with varicose veins, they are likely to return (recur). No treatment may be needed if the symptoms are mild. One or more of the following treatments may be advised, depending on your symptoms and the severity of the condition:

- Keep active. Try to keep up your normal activities. This should be possible unless the pain is severe.
- A hot cloth (flannel) placed over the vein. This may ease the pain.
- Painkilling tablets. Anti-inflammatory painkillers such as ibuprofen may ease the pain (but are not advised if you are pregnant). Paracetamol is an alternative. Some people may not be able to take anti-inflammatory painkillers. Check with your doctor or pharmacist. Always read the packet leaflet that explains possible side-effects. There is also some evidence that anti-inflammatory tablets may reduce the risk of superficial thrombophlebitis enlarging or extending within a vein and/or it coming back. However, more studies are needed to confirm this.
- Anti-inflammatory creams or gels. An example is ibuprofen gel. These are an alternative if superficial thrombophlebitis is mild and only affects a small area of vein. They tend to produce fewer side-effects than those taken by mouth.
- Hirudoid® cream (heparinoid) may improve your symptoms, although there is some evidence that heparin gel may be more effective.
- Fondaparinux (also called Arixtra®) is an injected medicine which inhibits one of the body's clotting factors. When given for six weeks it reduces the risk of DVT and of extension and recurrence of thrombophlebitis.
- Raising the affected leg. When you rest (when watching TV, or reading a book, etc), if you raise an affected leg so that your foot is higher than your hip, it helps to reduce swelling and discomfort. You can do this by lying on a sofa and putting the leg up on some cushions. When sleeping in bed, you can keep your leg raised by putting it on a pillow.
- Compression (support) stockings. These may be advised by your doctor if a vein in your leg is affected. They may ease discomfort and reduce swelling whilst the inflammation settles.
If your doctor feels that you may have a DVT or be at high risk of developing one, they may suggest that you are referred either to the hospital or to a special DVT clinic. This will enable you to have any investigations or treatment necessary (see above). Sometimes, prophylactic (just in case) treatment may be given to people who have superficial thrombophlebitis and may be at high risk of developing a DVT. This involves injection of a medicine to thin the blood.

Are there any complications from superficial thrombophlebitis?

The inflammation and pain usually settle within a few weeks. Most people make a full recovery. The possible complications listed below are uncommon. They are listed, however, to give guidance on what to look out for. See a doctor as soon as possible if you suspect that a complication is developing.

### Infection

Sometimes the affected vein becomes infected. The pain may then become worse and the redness spreads. You are likely to feel generally unwell. Infection is more common in someone who has had a drip inserted for a long period, in people who abuse ‘street drugs’ or in people with a weakened immune system. Antibiotics are needed to treat the infection. If the infection is severe, you may need to be admitted to hospital for antibiotics (given directly into a vein). Rarely, infection in a vein becomes severe and may spread to other areas of the body.

### Blood clot extension

In some cases, the blood clot can extend further up the vein. If the clot extends to where the superficial and deep veins join, a DVT can develop. This is more likely if the superficial thrombophlebitis is in the upper thigh or the groin, near to where the superficial veins and the deep veins of the leg meet. There is a similar meeting point of superficial and deep veins at the crease behind the knee. It is also more likely to occur:

- If superficial thrombophlebitis develops in a previously normal vein (not a varicose vein).
- If you have had a DVT before.
- If you are immobile for some reason.

See a doctor urgently if:

- Inflammation, redness, or hardness spreads up your inner thigh towards your groin or is around the back of your knee or calf.
- Your whole leg swells.
- Pain becomes suddenly worse.
- You develop any new breathing problems, or develop chest pains. Sometimes a clot from a DVT breaks off and travels to the lung.

When a DVT leads to thrombophlebitis, there is an increased risk of developing further DVTs and possibly clots on the lung (pulmonary embolism).

### Recurrent superficial thrombophlebitis

It is common for people with varicose veins to have repeated (recurrent) bouts of superficial thrombophlebitis. However, for a small number of people this may be the first sign of a more serious condition. For example, cancer or a rare condition called polyarteritis nodosa in which there is patchy inflammation of the walls of the arteries. This is more likely if the bouts occur at different sites, or in different veins in someone without varicose veins.

Tests may be advised if there is no obvious explanation for recurring bouts of superficial thrombophlebitis.

Further reading & references

- Thrombophlebitis - superficial; NICE CKS, May 2014 (UK access only)