



SCOTTISH VEIN CENTRE PATIENT INFORMATION

Ultrasound-guided Foam Sclerotherapy for varicose veins

Please read this information carefully. It will help you to understand the cause of varicose veins and what is involved in their treatment, with this very effective technique.

Ultrasound-guided Foam Sclerotherapy for varicose veins is now an established alternative minimally invasive method for treating varicose veins. It has been approved in June 2009 by the National Institute for Clinical Excellence (NICE) . They have issued new Guidelines in July 2013 that state that foam sclerotherapy is a second choice of treatment for symptomatic varicose veins when endovenous laser or radiofrequency ablation is unsuitable (or unavailable).

How do varicose veins happen?

Blood in the veins normally flows up the legs, back to the heart. It is under low pressure and gravity tends to push it back down the leg. This is normally prevented by one-way valves inside the veins which allow the blood flow up, but prevent it from flowing back the wrong way.

Most varicose veins are caused by a faulty valve in the groin or behind the knee. This faulty valve allows blood to be forced out into the veins under the skin (*the superficial veins*) from the main veins inside the leg muscles (*the deep veins*). This leads to the valves in the superficial veins becoming faulty and the increased pressure in the veins causes them to enlarge (dilate) and give rise to varicose veins. These are multiple bulges and bends involving the main superficial vein and branch veins.

The principle behind Foam Sclerotherapy is that it is used to shrink away the bulging branch veins in particular. Some doctors are also using it to try to close the main veins too, but this is still a controversial area and the evidence is not yet ready to prove this conclusively.

In our practice we will be offering Endovenous laser ablation (EVLA) to the majority of patients with reversed flow in their main superficial vein (either the long or short saphenous vein), above or below the knee respectively. EVLA is used to treat the underlying cause



of your varicose veins. Foam Sclerotherapy is therefore used in addition to EVLA. This was previously performed 4 to 6 weeks after EVLA, but we are now seeing excellent results in two thirds of cases when both EVLA and foam therapy are performed on the same day. This avoids the need for a second two week period wearing compression stockings.

Who else is suitable for Foam Sclerotherapy?

Some patients who have had previous surgery for varicose veins may not have a main superficial vein (removed at stripping), but may have multiple bulging veins causing recurrent problems. These may be suitable for Foam Sclerotherapy. Also, some people have only localized varicose veins at first time seeing a vein specialist and may be suitable.

How can we tell if you are suitable for Foam Sclerotherapy?

You will be asked a series of questions about any symptoms that your varicose veins are causing and any other health problems that you may have had. We will examine your legs and perform an ultrasound, called Doppler ultrasound. This is a form of scan that can check blood flow and direction. It will identify which faulty valves have caused your varicose veins. Scanning is done in a standing position and takes about 10 minutes per leg. It is done at an initial assessment, and is also repeated at the time of ultrasound-guided Foam Sclerotherapy. If the main faulty vein valve is in the groin or behind the knee, your varicose veins should be suitable for EVLA. Additional bulging branch veins may not resolve after EVLA (in over half of cases) and may be suitable for Foam Sclerotherapy. We do not treat people during pregnancy, and will also take account of other medical conditions.

What is sclerotherapy?

This is a long-established technique, which involves injecting a liquid chemical “sclerosant” solution directly into a vein. The effect is to irritate the lining of the vein, producing local inflammation of the vein wall causing the vein to shrink and close. Some of the effect also produces mixing of the agent with blood and local blood clot formation, The safety of the chemicals used, however, has been proven over more than four decades. The drawback of this older technique is that the effect is often incomplete in larger veins and research shows that as many as 7 out of 10 people will get return of their problems. Liquid injection sclerotherapy is therefore now more commonly reserved for very superficial thread and spider veins less than 2 millimetres wide.



What are the advantages of Foam Sclerotherapy?

When the liquid sclerosant chemical is forcibly mixed with air it is transformed into a white foam. This is injected directly into a vein, and rather than mix with blood, it pushes the blood out of the way and slows down local flow. This has the effect of prolonging contact of the agent with the vessel wall, in higher concentration. Therefore the sclerosant-effect is maximised. This is further enhanced by applying prolonged pressure on the vein to keep it closed down. This is achieved by the application of a specially fitted compression stocking which remains in place for two weeks after the treatment.

The other major advantage of the technique over traditional sclerotherapy is the use of ultrasound scanning to guide injection. This guarantees that the foam is delivered into the vein, and not the surrounding tissue, where it may cause irritation. The foam is seen easily and can be massaged along the course of the vein with the scanner itself.

What is involved in the procedure?

The patient reclines on an examination couch and the leg is examined with ultrasound. The site or sites of injection are chosen and marked. The foam is prepared and injected using a very small needle directly under ultrasound vision. Usually no more than three or four injections of 2 - 3ml each are needed to fill all the bulging veins.

During the injection the patient is asked to move their foot by bending at the ankle about 20 times. This action ensures that any small amount of foam entering deeper veins is immediately diluted with blood and washed away to the main circulation.

The foam is “followed” with the scanner and not allowed to travel from the long superficial vein into the deep vein at the groin. This is prevented by direct pressure at the groin and by elevating the whole leg. The whole procedure takes about 20 minutes.

At the end of the injection session the patient will have bandaging applied which is kept on day and night for five days. You will have a fitted compression stocking applied too. This is kept on during the day for two weeks at least.

If the other leg requires the same treatment, then this may be done at the same session in some cases, but may also be performed separately. Usually at 6 weeks, the veins will have disappeared, but sometimes there is some left-over bruising and local lumpiness. This normally resolves over another few months. Some very hard tender lumps can be reduced with needle puncture and suction under local anaesthetic (trapped blood).



What are the advantages over surgery?

- It does not require any anaesthetic.
- The procedure is done as an outpatient, taking 30 - 45 mins. (2 legs)
- You should be able to resume your normal activities straight away and return to work the following day.
- It avoids the incisions (scars) required for a standard operation and therefore complications such as wound infection.
- Patches of numbness on the skin are rare (5% of patients with surgery).
- There is very little discomfort or pain after the procedure.
- The success rates reported are very encouraging, with one study showing only 3 out every 100 legs with problems at 2 years follow-up.
- Surgical and foam sclerotherapy recurrence rates are similar, but recurrent veins are more difficult to manage with further surgery.

Are there any complications from Foam Sclerotherapy?

- Complications following Foam Sclerotherapy are uncommon. Those of which you should be aware of are :
- Thrombophlebitis; local hot, tender surface veins which resolve with medical treatment, leaving no scars. Local Ibuprofen gel will help.
- Brown pigmentation; some very superficial veins become pigmented. This is avoided by proper compression stockings. We can release “trapped blood” from the vein with a local anaesthetic and needle at review 6 weeks after first treatment. This reduces staining too.
- Matting : reactive purple “blush” of new small veins is also uncommon
- Allergy and local irritation; allergy may be unavoidable, but local tissue reaction is reduced by accurately guiding the injection with ultrasound.
- Ulceration; is a consequence of injecting into the tissues. It is uncommon, but may leave a small permanent white or brown patch.
- Thrombosis in deep calf veins has been reported, but is rare. One study showed it occurred only 4 times in over six thousand cases.
- Temporary blurry vision, dizziness, nausea, headache and fainting are all uncommon (5 per 2000 procedures). More common in migraine sufferers.
- **DO NOT DRIVE IMMEDIATELY AFTER FOAM THERAPY**
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If you have any further queries concerning this procedure, or if there are any more points you would like clarified, then please do not hesitate to contact us at Scottish Vein Centre.

Telephone : 07366591367

