

Ultrasound-guided foam sclerotherapy treatment of varicose veins: Patient information sheet and consent

Simon Ashley MS FRCS

Consultant Vascular Surgeon, Nuffield Health Plymouth Hospital

Ultrasound-guided foam sclerotherapy (UGFS) is an established minimally invasive treatment for varicose veins. NICE (National Institute for Health and Clinical Excellence) published updated guidance on UGFS in February 2013 (IPG440) and consider that current evidence for the safety and efficacy of this procedure is adequate. UGFS is performed with the patient lying on a couch in a treatment room. A local anaesthetic injection is used to numb the skin at the site where a small catheter or needle is inserted into the relevant vein(s) using ultrasound guidance. This is usually either the 'greater' or long saphenous vein on the inside of the thigh or the 'small' or short saphenous vein on the back of the calf. Sometimes more than one catheter or needle is inserted. Once the catheter/needle(s) is in position, the leg being treated is raised to empty all the veins. The foam is prepared and injected into the vein. The foam rapidly spreads along the vein and is followed using the ultrasound machine. When it reaches the upper end of the vein being treated, firm pressure is applied to the vein to compress it. Injection of foam continues as the foam spreads into the varicose veins. In about 90% of cases, only one injection of foam is needed. In about 10% of cases secondary injections are required later on. The injection causes no pain in the leg, although sometimes some bubbling can be felt. After injection, the leg is compressed with a tight stocking. The compression stocking should be worn continuously for a minimum of five days after treatment.

The main complications and side effects of ultrasound-guided foam sclerotherapy are as follows:

- **Bruising, blemishes and skin pigmentation:** This nearly always disappears in a few weeks but can persist and, rarely, it can be permanent.
- **Lumpiness:** Sometimes the varicose vein can still be felt as lumps beneath the skin. These will usually slowly resolve over 3–6 months.
- **Thrombophlebitis:** Some treated veins become inflamed and a painful tender lump can develop following treatment with or without redness in the overlying skin. This is called 'thrombophlebitis' and occurs to some extent in about 1 in 5 patients. It will usually settle without treatment over about two weeks. Sometimes an anti-inflammatory drug (e.g. Ibuprofen) and/or wearing the compression stocking for longer is advised. Very occasionally a small needle is inserted to aspirate clot from the painful vein.
- **Deep vein thrombosis:** Rarely, thrombosis may spread to the deep veins following injection of foam. This occurs in about 1 in 400 patients. If the leg swells and/or becomes generally tender or painful you should contact us immediately for advice and a consultation. If a deep vein thrombosis forms you may require treatment with blood-thinners (Heparin or Clexane and Warfarin).
- **New 'spider' veins:** Foam sclerotherapy may result in the development of new 'spider' veins in the leg in susceptible people but this is uncommon. These may be treated by liquid micro-injection sclerotherapy, if necessary.

Other rare adverse events include: allergic reactions, temporary chest tightness, dry cough, headaches, malaise, fainting and visual disturbance. Extremely rare but significant complications including myocardial infarction, seizures, transient ischaemic attacks and stroke have been reported. Only a few cases of stroke have been reported in the world literature using air-based foam, all with complete or near complete recovery. We always use foam made with carbon dioxide plus oxygen which is potentially safer as these physiological gases are fully absorbable in the body unlike air. While millions of Foam Sclerotherapy treatments have been performed, no death or stroke with significant after effects have been reported to date.

Current evidence suggests no clinically significant difference between foam sclerotherapy and other treatment modalities for varicose veins in the short-to-medium term. Current research does not provide clear evidence of the efficacy of this treatment in the long-term.

Foam sclerotherapy compared to other commonly available treatments for truncal varicose veins

There are pros and cons to foam sclerotherapy when compared to other commonly available treatments such as surgery and/or endo-thermal catheter ablation techniques (e.g. radiofrequency or laser).

Advantages of foam sclerotherapy

- Avoids the need for hospital admission, cuts, scars, surgery and general anaesthesia.

- Avoids the need for tumescent anaesthesia where large volumes of local anaesthetic solution is injected under the skin along the inner thigh or back of calf, as required for endovenous thermal ablation using radiofrequency or laser catheters.
- Minimal risk of damage to sensory nerves.
- Nearly all types of varicose veins are suitable.
- Results in minor discomfort during treatment, and less bruising compared to surgery or laser treatment.
- Little or no time is required off work.

Disadvantages of foam sclerotherapy

- Usually only one leg is treated at a time, whereas it is possible to treat both legs at once with surgery or endovenous catheter ablation.
- More clinic attendances required than for surgical treatment (usually 3-5 appointments if both legs are treated).
- Several months required for the final outcome to be obtained, with resolution of all bruising and lumps.
- Small risk of permanent skin staining.

About 20% patients will get recurrent varicose veins within 5 years regardless of treatment modality due to the underlying hereditary / genetic predisposition to forming varicose veins.

Pre-treatment preparation for foam sclerotherapy

1. On the day of treatment wash your leg with ordinary soap but please do not apply any lotions, creams or perfumes to the leg after washing.
2. If possible, please do not take aspirin or non-steroidal anti-inflammatory painkillers [such as Ibuprofen] for 24 hours before treatment (they may increase bruising).
3. Eat a light meal before attending.
4. You will need to take a brisk 15 minute walk immediately following your procedure, so please be prepared to stay in the clinic for at least 30 minutes after your treatment so that we can make sure you are okay before going home.
5. It is probably most comfortable and convenient to wear loose trousers and soft shoes, e.g. training shoes, to your appointment, but this is not crucial.
6. We advise that you do not drive on the day of your procedure, so you will need to arrange for someone to transport you home after your procedure.

Please also see separate information leaflet “Ultrasound-Guided Foam Sclerotherapy”

Patient Label:

Consent: *(to be completed prior to treatment)*

I,.....have read and understood the above information, had all my questions satisfactorily answered, and hereby consent to undergo **ultrasound-guided foam sclerotherapy to my leg**. I also understand that it is my responsibility to meet the fees for treatment in the event of insurance non-payment or shortfall.

Patient’s signature.....Date.....

Witnessed:

Mr Simon AshleyDate.....

(Patient to take one copy, second copy to Nuffield Hospital, third copy to patient notes)