Foam Sclerotherapy

What is Foam Sclerotherapy?

Foam sclerotherapy is a minimally invasive treatment technique for lower limb superficial venous disease. It has a comprehensive application in the treatment of varicose veins and cosmetically troublesome spider veins/ telangiectasia.

It involves the combining of a sclerosant chemical e.g. fibrovein, with air to create a foam sclerosant that is injected directly into the abnormal vein. The foam interacts with the lining of the vein wall causing an inflammatory reaction leading to the destruction (sclerosis) and cosmetic resolution of the abnormal vein.

Foam sclerotherapy has a number of potential advantages over other treatments for varicose veins e.g. open surgery or endovenous thermal ablation. Due to its minimally invasive nature and few associated side effects it can be safely performed in the outpatient setting, and offers an alternative treatment strategy for clients who may be unfit for other forms of treatment.

Foam sclerotherapy may be performed in isolation or as part of a combined treatment strategy for the client's venous disease e.g. combined with radiofrequency ablation.

Why is this operation being offered?

This operation will be offered to clients suffering with symptomatic varicose veins or cosmetically bothersome spider veins/telangiectasia.

What happens before your operation?

Before you undergo any form of varicose vein treatment you will undergo a duplex Doppler ultrasound examination of the lower limb venous system and an ankle-brachial pressure index assessment. These tests enable your surgeon to correctly assess the best treatment modality for the individual client.

Once the decision has been taken to proceed with foam sclerotherapy a date will be agreed between yourself and your surgeon. Unless foam sclerotherapy is being performed as a joint case in which the other treatment modality requires an anaesthetic a pre-admission visit is not normally required.

What happens on the day of admission?

Foam Sclerotherapy is performed as a day case procedure with the client awake. You will be told the time to arrive for your treatment and greeted by the medical staff upon arrival.

The consultant will check with you that you fully understand what you are undertaking and ask you to sign your consent form for the procedure.

You will be asked to stand and the consultant will mark your veins with a marker pen or use a USS to confirm their location.

Please do not stop any of your normal medications unless specifically instructed to by your surgeon

If you smoke we strongly encourage you to stop as soon as possible to reduce the risk of peri-operative complications.

What do I need to bring when I come into hospital?

You should bring the following items with you at the time of admission:

- All your normal medication
- A set of comfortable loose clothes for discharge

What happens during the treatment?

You will be transferred from the admission unit to the treatment room where you will be asked to lie on the treatment bed.

The skin overlying the premarked veins is injected with local anaesthetic and then the veins are cannulated under ultrasound control. The leg is then elevated in a sling and the client is tilted ‘head down’ on the bed. The foam is then injected through the cannulae into the abnormal veins. For the larger veins or truncal veins (great saphenous vein or lesser saphenous vein) the surgeon may ‘milk’ the foam with the ultrasound probe to disperse the foam adequately within the whole vein. The client will be asked to flex their ankle after each injection to pump the blood through the veins and remove any residual foam from the major veins.

Following treatment the cannulae are removed and the client is placed into compression hosiery or compression bandaging depending on the surgeons preference. This remains undisturbed for seven days.

What are the risks?

Foam sclerotherapy is inherently a safe treatment modality. However, as with all forms of invasive treatment adverse reactions can occur:

- Local
  - Skin pigmentation
    - Skin hyperpigmentation overlying the treated varicose veins and spider veins is a common occurrence and probably effects one in five clients treated with foam sclerotherapy.
    - Spontaneous resolution occurs with 6-12 months of treatment in >75% of cases. However, a very small proportion of clients will be left with an element of permanent skin hyperpigmentation that although not clinically significant, may be cosmetically apparent.
  - Telangiectasia
    - Although foam sclerotherapy is often employed to treat telangiectasia, new telangiectasia may form following foam sclerotherapy.
    - Clients may notice fine purple veins forming at the site of treatment
    - These can be successfully treated with further sclerotherapy or with other techniques in the majority of cases.
  - Superficial thrombophlebitis
    - A common side effect of foam sclerotherapy due to its underlying mechanism of action is the painful build up retained clot in the varicose vein itself.
    - This is not a DVT and is rarely dangerous.
    - Clients will notice a hard, painful, lumpy area at the site of treatment.
    - This will often respond to topical NSAIDs e.g. ibuprofen cream. In addition your surgeon may elect to aspirate the clot through a small needle providing pain relief.
  - Recurrence or residual veins
    - One in three or four clients will require a further treatment session to treat residual veins following the first treatment
    - One in three clients will develop a recurrence of or new varicose veins within three years of the initial treatment.
  - Ulceration
    - Very occasionally the sclerosant can seep out of the treated vein into the surrounding tissue or adjacent micro-arteries (arterioles) causing inflammation, necrosis and skin ulceration. The majority will spontaneously heal albeit with a small scar, but on occasion the ulcer will require further treatment to attain healing.

- Systemic
  - Cardiorespiratory
    - Occasionally during the treatment itself clients may experience chest tightness, a bout of coughing or light headiness.
    - We do not perform foam sclerotherapy in clients with asthma or a known patent foramen ovale
  - Neurological:
    - Transient post-procedural migraine or visual disturbances are reported in ≈1% of clients; the majority occurring within one hour of the procedure. These spontaneously resolve and appear to cause no permanent sequelae.
    - Mini Stroke: There have been reports in the medical literature of transient ischaemic attack occurring following foam sclerotherapy. This would appear to very rare and spontaneously fully resolve within 30 mins of occurrence.
  - Deep Vein thrombosis (DVT)
    - DVT may occur after foam sclerotherapy but is also very rare and appears to be no different in risk to other minimally invasive techniques for treating varicose veins e.g. radiofrequency ablation.
  - Ulceration
    - Very occasionally the sclerosant can seep out of the treated vein into the surrounding tissue or adjacent micro-arteries (arterioles) causing inflammation, necrosis and skin ulceration. The majority will spontaneously heal albeit with a small scar, but on occasion the ulcer will require further treatment to attain healing.

The vast majority of patients undergoing foam sclerotherapy do not suffer any significant complications and are satisfied with both their clinical and cosmetic outcome.

What happens after the operation?

Following the application of the compression hosiery the client is asked to walk for thirty minutes around the treatment centre before being discharged.

What happens when I go home?

You will be discharged with appropriate post-operative instructions on your care to help reduce complications.

- You should not drive home and should arrange appropriate transport.
- You must have an able bodied person with you for 24 hours with full access to a telephone in case of emergency.
- Your leg may be uncomfortable once the local anaesthetic has worn off and your leg will be slightly swollen.
- You should wear your compression stocking for two weeks. During the first week do not remove the compression stocking unless for bathing. During the second week wear you may remove it at night.
- We recommend that you take a minimum of three 20 minute walks each day for the first 4 weeks post-procedure.

When Will I be able to drive or return to work?

We advise that you do not drive for at least 24 hours after the procedure and you should only drive when you are pain free and able to safely perform an emergency stop.

You can usually return to work immediately depending upon your recovery and the type of work that you do. Avoid strenuous exercise for a few days and then gradually build up the amount you do. We do not advise any form of air travel for at least six weeks after the procedure.

Will I need to see the surgeon again?

You will be reviewed in clinic approximately 6 weeks following discharge.