Service:
Imaging

Sclerotherapy for Venous Vascular and Lymphatic Malformations
Your doctor has requested that you have sclerotherapy. We hope that the following information will answer some of the questions you may have about this procedure.

**What is a venous vascular malformation?**

Venous vascular malformations are abnormal collections of veins. They are present from before birth, but often not noticeable until much later in life. They grow with the person and may not cause any symptoms at all. They most commonly appear either as a soft lump with a bluish colouration. They may cause pain or be cosmetically disfiguring. These symptoms may worsen after trauma, infection or hormonal changes such as puberty or pregnancy.

**What is a lymphatic malformation?**

Lymphatic malformations are where the lymphatic system (part of the body’s immune system) has failed to form normally in one part of the body and instead forms fluid filled spaces that may occasionally be painful.

**Who will be involved in my treatment?**

Your initial consultation is likely to be with a consultant radiologist, but at North Bristol there are also vascular surgeons, plastic surgeons and other specialists with experience in vascular malformation management, allowing a multidisciplinary approach to treatment.
How is a suspected vascular or lymphatic malformation investigated?

Usually the diagnosis can be made on clinical examination and patient history at an outpatient appointment. The area of concern will normally be imaged with ultrasound. If the ultrasound does not provide enough information then an MRI scan may be arranged. MRI is particularly useful for assessing larger and deeper malformations, or for providing detail of the anatomy of those malformations near important structures. Occasionally imaging cannot provide enough information on its own and then a small piece of tissue (a biopsy) may be needed to analyse the types of cells present in a malformation.

How is a suspected vascular or lymphatic malformation treated?

Venous vascular or lymphatic malformations are not dangerous conditions and often require no treatment at all. Treatment is normally only indicated if the malformation causes pain or limitation in activity. Non-invasive treatments such as compression stockings can be useful for venous vascular malformations and may be tried first before any invasive interventions such as sclerotherapy are discussed.
What is sclerotherapy?

Sclerotherapy is a treatment for venous vascular or lymphatic malformations. A sclerosant is a powerful chemical that is injected into the vascular or lymphatic spaces within a malformation causing scarring. This is performed using imaging guidance to ensure the sclerosant does not affect nearby normal structures. The procedure is performed by a team led by a consultant radiologist. A radiologist is a doctor who has particular training and experience in the use of imaging to guide treatment.

Who has decided that sclerotherapy is appropriate for me?

If sclerotherapy has been proposed for you the consultant radiologist, in agreement with any other doctors involved in your care (consultant surgeon or consultant physician), will have decided that you would be likely to benefit from sclerotherapy. This will have been discussed and agreed with you in clinic. Your opinion will be taken into account and if after discussion with your doctors you do not want the procedure carried out, then you can decide against it.

The procedure uses x-rays and the amount of radiation used is small, however if you think you may be pregnant please inform the Imaging department before attending the appointment.

What happens before the procedure?

You will need to have a blood test a few days before the procedure to check your kidney function, that you are not at increased risk of bleeding and that it will be safe to proceed. This may be arranged to take place at your GP surgery.
You can continue taking your normal medication. If you are on any medication which thins the blood (e.g. aspirin, clopidogrel, warfarin, rivaroxaban, dabigatran, apixaban) we ask you to call the interventional radiology department using the number on your appointment letter as we may need to adjust your medication before undergoing this procedure.

**On the day of the procedure**

- You should not eat anything from midnight the night before the procedure. You may drink clear fluids until 7am on the day of the procedure.
- You will arrive at the Imaging Department and be accompanied into our day case area.
- You may take your normal medication unless instructed otherwise.
- Please inform us if you are allergic to anything.
- A doctor will discuss the procedure with you. You will be given an opportunity to ask questions. If you want to go ahead with the procedure you will be asked to sign a consent form.
- You will be asked to change into a hospital gown and a small plastic tube (cannula) may be put into your arm.
- Once all the checks have been performed and consent signed, you will be taken to the angiography suite on the trolley. There will be a nurse, radiographer and a doctor with you throughout the procedure.
- The doctor will use an ultrasound machine to look at the vascular malformation to find the correct area to be treated.
Your skin will be cleaned with an antiseptic solution and covered with sterile drapes.

The doctor will then inject local anaesthetic into the area selected, which will briefly sting and then go numb. The radiologist will then inject x-ray dye into the malformation to confirm the needle position and that it is safe to inject sclerosant. The sclerosant will then be injected through one or several small needles into the malformation under ultrasound and x-ray guidance. The procedure is likely to take about 30 minutes.

Once the procedure is complete the needles will be removed and the doctor will apply a dressing if necessary. If the malformation is in a limb, the limb may be bandaged, and you may be asked to wear a compression garment for a period of 1 week.

What happens after the procedure?

You will be taken back to the radiology day case unit, so that nursing staff may monitor you closely.

If you are in pain tell the nursing staff so you can be given appropriate painkillers.

You will be required to stay in our day case unit for 4 hours.

You will be able to eat and drink as normal.

If everything is satisfactory, you will be free to go home.
What are the risks associated with sclerotherapy?

Sclerotherapy is usually a safe procedure. Potential complications include:

- In the first 24 hours following sclerotherapy, the area is likely to be very swollen. Painkillers will be administered as necessary to keep the inevitable associated pain under control. The pain will resolve within a few days but it may take several weeks for the swelling to settle completely.

- You may notice your urine turn red the first time you urinate after the procedure. This is entirely normal after sclerotherapy and should not cause you any concern.

- You may experience a fever during the first 12 hours after the procedure, though this will resolve without further treatment.

- The one serious risk associated with sclerotherapy is if the sclerosant spreads beyond the malformation and causes damage to nearby normal tissues. This is a rare complication, but can cause permanent damage to the affected tissues. One example could be damage to the overlying skin which may ulcerate and cause scarring of the area. Other structures that could be affected depend whereabout in the body the malformation is, but could include muscle or nerve damage which may be permanent.

If you experience any symptoms you are concerned about, please contact the radiology department directly on the number on your appointment letter or alternatively contact your GP or the emergency department.
Am I likely to need more than one treatment session?

The amount of sclerotherapy that can be performed at a single treatment session is limited by the local pain and swelling caused. Whether or not multiple sessions are required depends in part on the size of the malformation, but the majority of people with a vascular malformation require multiple sessions. This may be 2, 3 or 4 for a successful outcome. Because it is rare for a patient to be completely cured of a vascular malformation, the malformation may again start to cause symptoms in the future and further treatment session(s) may be required at that time.

How successful is sclerotherapy?

Patients with a vascular malformation suitable for sclerotherapy are likely to have an improved quality of life in the majority of cases following a series of sclerotherapy treatment sessions. However, it would be very unusual for the patient to be completely cured. It is almost never possible to eliminate the malformation completely using sclerotherapy. Again, if you experience any symptoms you are concerned about, please contact the radiology department directly on the number on your appointment letter or alternatively contact your GP or the emergency department.

Finally we hope this information is helpful. If you have any questions either before or after the procedure the staff in the X-Ray department will be happy to answer them.
References and Sources of further information


National Institute for Health and Clinical Excellence.
Website available at: www.nice.org.uk and follow links via Our guidance… NICE guidance by type… Interventional procedures to Sclerotherapy of vascular malformation of adult patients and Percutaneous sclerotherapy of low flow vascular malformations of the face and neck [accessed February 2010]

Hemangiomas and Vascular Anomalies.
Website available at: www.birthmarksupportgroup.org.uk
[accessed February 2010]

NHS Constitution. Information on your rights and responsibilities. Available at www.nhs.uk/aboutnhs/constitution
If you or the individual you are caring for need support reading this leaflet please ask a member of staff for advice.

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