University Hospitals Dorset
NHS Foundation Trust

Sclerotherapy for low flow vascular malformations

Radiology Department Patient information

What is a low flow vascular malformation?

This is an abnormal collection of blood vessels. When these blood vessels are scanned (using ultrasound or MRI), the flow of blood within them is of low flow or under low pressure. They are present from birth, but are often not noticeable until later on in life. As the person grows, so does the malformation. They most commonly appear as a soft, lump that can be pressed, with a bluish colour and they can vary in size and location on the body. Symptoms may include discomfort, especially after prolonged sitting or standing and/or cosmetic disfiguring.

What is sclerotherapy, and who performs the procedure?

Sclerotherapy is a treatment for low flow vascular malformations. A liquid (sclerosant) is injected directly into the abnormal vessels to make them close up. The procedure is done in the X-ray department by a specially trained doctor called an Interventional Radiologist. Radiologists have expertise in using x-ray equipment, and also in interpreting the images produced. The radiologist will look at these images while carrying out the procedure to ensure the liquid (sclerosant) injected does not affect normal blood vessels or nearby structures.

Occasionally, depending on the position of the vascular malformation on your body, this procedure is carried out under general anaesthetic. This is most likely when the vascular malformation is on your face or head, or in your mouth. A general anaesthetic makes you completely asleep so that the procedure can be performed without causing pain or distress. General anaesthetic will be given to you by an anaesthetist (a specially trained doctor). A small needle will be placed in a vein on your arm to allow the anaesthetist to give you any injections of medication that are needed.

Why do I need sclerotherapy?

The doctors involved in your care (Consultant Surgeon or Consultant Physician) will have discussed your case with the Consultant Interventional Radiologist and agreed that you would be likely to benefit from sclerotherapy. However, if after discussion with your doctors you do not want the procedure carried out, then you can decide against it.

What hospital staff might I meet?

On the day, you may be required to attend a ward before your procedure. There will be nursing staff on this ward who will look after you before and after your treatment. For the procedure, a porter will take you to the x-ray department where you will meet the radiologist who will perform the procedure. The radiologist will be helped by radiographers and x-ray nurses. Radiographers are trained to work the x-ray machines. The x-ray nurses help the radiologist with the special equipment needed for the procedure.

If you are having your procedure under a general anaesthetic, you will also meet an anaesthetist. This is a specially trained doctor who will give you the general anaesthetic and stay with you throughout the procedure. After the procedure is over, your anaesthetist will reverse the anaesthetic and you will gradually begin to wake up. You may also meet an Operating Department Practitioner who is specially trained to help the anaesthetist.

When you are waking up after your procedure, you will be looked after by Recovery Nurses. These nurses have had special training to look after people who have had a general anaesthetic.

What will happen on my procedure day?

You will be admitted onto one of the hospital wards as a day-case patient. You will be asked to put on a hospital gown. You will be brought to the special procedure room in the X-ray department on your bed.

After the procedure, you will be transferred back to the hospital ward where you were admitted to at the start of the day for the remainder of your recovery period. Most patients are usually able to go home later on the same day after their procedure. Occasionally, if a longer recovery period is required, you may be kept in hospital overnight.

If you are having the procedure performed under general anaesthetic, you will be given this once you are in the X-ray room. After the procedure, you will wake up in a recovery area outside the X-ray room. Once the Recovery Nurses are happy that you have recovered from your general anaesthetic, you will be transferred back to the hospital ward where you were admitted to at the start of the day.

What actually happens during sclerotherapy?

You will be asked to lie on your back on an x-ray table. The area around the low flow malformation will be cleaned with antiseptic. Sheets will be placed around the area to keep everything clean. You will have monitoring devices attached to your arm and finger - this is routine practice.

Using an ultrasound machine for guidance, the Interventional Radiologist will place some small needles into the vascular malformation. A small amount of X-ray dye (contrast medium) may be injected to confirm the needles are correctly positioned. The Interventional Radiologist will then inject local anaesthetic and sclerosant into the vascular malformation to block the abnormal blood vessels.

Will it hurt?

The needles used in this procedure are small, but you will feel some stinging sensation initially. During the procedure, you are likely to experience some aching, pain and swelling of the area of the body affected by the malformation. This is a normal reaction following injection of sclerosant into the malformation. This effect may last up to 10 - 14 days and pain killers available over-the-counter will help reduce these symptoms.

How long will it take?

Every patient's situation is different, and it is not always easy to predict how complex or how straightforward the procedure will be. Generally, the procedure itself will take between 30 - 60 minutes. You may be in the x-ray department for a short time after your procedure has finished whilst the nursing staff complete routine observations of your blood pressure and pulse.

What happens afterwards?

In some cases, you will be able to return home straight away after your procedure. If it has been decided that you need a hospital bed, you will be taken back to your ward and nurses will continue to carry out routine observations, such as taking your pulse and blood pressure, to make sure that there are no unwanted effects.

You will generally stay in bed for a few hours, until you have recovered, and will usually be allowed home on the same day. You should arrange for someone to collect you and accompany you home - you should not drive yourself.

If the treated area is in a limb, the limb will be bandaged. You will also be asked to wear a compression garment for the first few weeks following the procedure

Depending on whereabouts on your body the vascular malformation is located, strenuous activities such as heavy lifting should be avoided for one week after your procedure. If the treated area is in a limb, driving should also be avoided for one week after the procedure. It is advisable you contact your insurance company to inform them of the procedure you have had.

Are there any risks or complications?

Sclerotherapy is a safe and effective procedure but as with all medical treatments there are some risks and complications that can arise.

Many people experience temporary side effects of pain, bruising and swelling following the procedure which should reduce after a few days (but may last up to 10-14 days). These symptoms usually improve with painkillers available over-the-counter.

If the malformation is close to or just under the skin there is a small risk of skin blistering and occasionally skin loss. If this were to occur, it usually would require special bandaging; rarely, it may require an operation.

Very rarely, temporary or less likely permanent damage to adjacent structures or nerves can occur. This happens if a nerve lies very close to the malformation. This may result in an area of numbness or weakness. Typically, this improves over a 3 - 6 month period. This will have been taken into account by the team of doctors in charge of your care before deciding whether or not this type of treatment is suitable for you.

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.

X-rays are used during this procedure. The doses used are carefully monitored but if there is any chance that you are, or think you may be pregnant, this procedure may not be suitable. On the day of your admission to hospital, a pregnancy test may also be requested.

The X-ray dye used can occasionally cause allergic reactions: if you have had previous problems with X-ray dye, please let the Interventional Radiologist doing the procedure know.

There is a chance the malformation may not shrink. Treatment is aimed at relieving your symptoms and is not necessarily a cure. The malformation may also grow, in which case further treatment may be required.

If a general anaesthetic is required this carries an extremely small risk.

Despite these possible complications, the procedure is normally very safe, and is frequently carried out with no significant side-effects at all.

How successful is sclerotherapy?

Sclerotherapy studies typically report an 80% success rate. It would be unusual to be completely cured using sclerotherapy as it is almost never possible to get rid of the malformation completely.

Am I likely to need more than one treatment session?

The amount of sclerotherapy that can be performed at a single session is often limited by the local pain and swelling caused. Whether or not multiple sessions are required depends in part on the size of the malformation.

As it is rare for a patient to be completely cured of a vascular malformation, after a number of years the malformation may again start to cause symptoms and further treatment sessions may be required at that time.

Will I receive any follow up?

You will have an Outpatient follow up appointment with the Interventional Radiologist after your procedure. This may involve you having further scans to assess the effects of your procedure. The date for this appointment will be sent out to you in a letter.

If you have any further questions, please telephone us on **0300 019 4286**.

Useful Phone Numbers

Royal Bournemouth Hospital switchboard: **0300 019 3626**

Radiology Appointments: **0300 019 4286**

and finally...

If you found reading this leaflet difficult and do not understand what it means for you, please contact us.

Some of your questions should have been answered by this leaflet, but remember that this is only a starting point for discussion about your treatment with the doctors looking after you. Make sure you are satisfied that you have received enough information about the procedure and please contact us with any queries or concerns.

We can supply this leaflet in other formats, in larger print, on audiotape, or have it translated for you.

Please call the Patient Advice and Liaison Service (PALS) on **0300 019 4886**, text or email **pals@uhd.nhs.uk** for further advice.

To read this leaflet in a different language, please visit our website: **www.uhd.nhs.uk/visit/patient-information-leaflets** and use the language and accessibility function available along the top of the site.

To ask for this leaflet in larger print, please contact the patient experience team on **0300 019 8499** or email **uhd.patientexperienceteam@nhs.net**.

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