

## Venous sclerotherapy: information for families

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**Venous sclerotherapy is a procedure used to treat venous malformations. Venous malformations are made up of extra veins that have no use and cause problems. This information sheet explains about venous sclerotherapy, why it might be suggested and what to expect when your child comes to Great Ormond Street Hospital (GOSH) for the procedure. An Easy Read information sheet is also included for your child. Sclerotherapy is also used to treat lymphatic malformations and vascular malformations around the eye (orbital sclerotherapy). Information about these procedures is also available.**

Instead of flowing back to the heart as in normal veins, the blood collects inside the venous malformation, making the veins stretch. Venous malformations are congenital, that is, they were present when your child was born. A medicine is injected into the veins, which irritates them encouraging them to scar to shrink.

Venous malformations can grow quite large, which can cause problems with sport or other day to day activities. They can also look unsightly. If the malformation is very close to, or inside a joint, there is a chance it can bleed into the joint increasing the chance of developing joint problems later in life. The veins in the venous malformation are prone to developing blood clots, which although are generally not dangerous, can be painful. If the veins are close to the skin surface, the skin can look blue or blotchy.

Sclerotherapy is a way of trying to reduce the size of the veins, so that they are less bulky, less painful, less troublesome to joints and less unsightly. Sclerotherapy is carried out in the Department of Radiology by a doctor (radiologist) who specialises in using imaging to carry out procedures.



*Image of chest and shoulders showing venous malformation in left shoulder*

### **What happens before venous sclerotherapy?**

You will already have received information about how to prepare your child for the procedure in your admission letter. You may need to come to GOSH before the sclerotherapy so that your child can have a pre-admission assessment to check that they are well enough. This appointment is usually arranged for the day of the procedure and

may involve taking blood samples, photographs and other tests.

If your child has been given a compression garment, please make sure that it fits them well, as they will need to wear it for the first few weeks after treatment. If it does not fit very well, please tell your doctor at the pre-admission assessment so that your child can be re-fitted before the procedure.

The person bringing your child to the procedure should have 'Parental Responsibility' for them. Parental Responsibility refers to the individual who has legal rights, responsibilities, duties, power and authority to make decisions for a child. If the person bringing your child does not have Parental Responsibility, we may have to cancel the procedure.

On the day of the procedure, you will meet the radiologist. They will explain the procedure in more detail, discuss any questions you may have and ask you to sign a consent form giving permission for your child to have the sclerotherapy. If your child has any medical problems, please tell the doctors. An anaesthetist will visit to talk to you about your child's anaesthetic.

Many of the studies we perform involve the use of x-rays. Legally, we are obliged to ask any girls over the age of 12 whether there is any chance they might be pregnant. We may ask for a urine or blood sample for pregnancy testing. This is to protect babies in the womb from receiving unnecessary radiation.

## What does the sclerotherapy involve?

Venous sclerotherapy is almost always carried out while your child is under a general anaesthetic. It is important that your child does not eat or drink anything for a few hours before the anaesthetic. This is called 'fasting' or 'nil by mouth'. Fasting

reduces the risk of stomach contents entering the lungs during and after the procedure.

You will be informed the night before the procedure of the time that your child should be 'nil by mouth' – in other words, have nothing to eat or drink before the anaesthetic. Fasting times are provided in your admissions letter.

It is equally important to keep giving your child food and drink until those times to ensure they remain well-hydrated and get adequate nutrition. This may involve waking your child in the night to give them a drink which we recommend.

Once your child is under general anaesthetic, the radiologist will check and measure the venous malformation using an ultrasound scan. Using the ultrasound scan as a guide, they will insert a small needle through the skin into the abnormal veins. They will then inject a small amount of dye through the needle and take an x-ray. This gives a clear 'map' of the malformation so that treatment is only given to that area not the surrounding tissue.

They will inject a very small amount of medicine through the needle, which irritates and inflames the malformation causing swelling, but this goes down over the next few weeks. Finally, the radiologist removes the needle. No stitches or dressings are needed – you will only be able to see a few pinpricks in the skin.



*Before sclerotherapy*



*X-ray showing venous malformation below knee*



*After sclerotherapy*

## **Are there any risks?**

Your child will be having sclerotherapy under general anaesthetic. Every anaesthetic carries a risk but this is extremely small. Sclerotherapy causes irritation and swelling, so the area treated will look a little worse than usual after the procedure. This is usually a good sign as it shows the medicine is working.

The area may feel bruised and sore for a few days, but your child will have pain relief. There is a slightly higher risk of the malformation developing an infection after the procedure. Your child will need a short course of antibiotics if this happens.

As the medicine injected causes irritation, there is a very small chance that it will also irritate the skin

over the venous malformation if it goes too close to the skin surface. This is more of a risk where the skin is very blue or in delicate areas, such as eyelids or lips. The skin may develop blisters or develop sore patches. If this happens, you should contact your doctor. Usually any skin blistering is minor and heals in a few days without leaving a scar. Very rarely, the blisters are bigger and need special dressings to make them heal, which may leave a scar. This may require further treatment in the future.

The medicine may also irritate any nerves near the treated area, which can cause numbness, tingling or 'pins and needles'. Nerve damage is very rare and if it happens, is usually temporary. Usually the area recovers fully but occasionally it can be permanently affected. It can also affect the muscles in the area, causing spasms or weakness, although this usually improves in a few days or weeks.

Sclerotherapy works for most children but not all of them. Experience helps us understand which malformations are more likely to respond. If the doctors feel that the first sclerotherapy treatment has not been very successful, they might suggest surgery, perhaps in combination with further sclerotherapy.

## **Are there any alternatives?**

Sometimes, the doctor may suggest surgery to remove the malformation. Sclerotherapy may then be used to shrink the veins before surgery.

## **What happens afterwards?**

Your child will return to the ward after they have recovered from the anaesthetic. Some children feel sick and vomit after a general anaesthetic. Your child may have a headache or sore throat or feel dizzy, but these side effects are usually short-lived and not severe. Your child can start eating and drinking as normal once they feel like it.

If your child's venous malformation affects their arm or leg, the area will be covered with a crepe (stretchy) bandage after the procedure. Your child may need crutches for a few days afterwards to keep the weight off the leg. The physiotherapist will show your child how to use them properly before you go home.

The venous malformation will almost certainly look worse after the procedure as the bruising and swelling last for a few days. The treated area will feel uncomfortable afterwards but children's pain relief medicine is usually enough to deal with any pain.

The doctors will come to check your child's progress on the ward and will give you some information about what they have done during the procedure.

The medicine injected into the venous malformation can turn your child's urine a brownish colour. If this happens, it is usually noticeable the first time they wee after the procedure but usually only lasts a day. It is helpful for your child to drink plenty of fluid in the first 24 hours after the procedure.

## Going home

You will be able to go home once the doctors are happy that your child is recovering well.

Sclerotherapy usually causes the treated area to swell. It will feel tight but usually not painful. Most children only need a dose or two of children's pain medicine, such as paracetamol or ibuprofen. Swelling should start to go down within two weeks but the effects of the treatment, such as a decrease in pain or size, might not be obvious for a couple of months.

Your child may have dark-coloured urine during the first few hours after sclerotherapy. This is due to the drug being washed out of the blood by the kidneys. If this happens, it is important that your

child drinks plenty of water for the first two days after the procedure.

You should call the hospital if:

- Your child is in a lot of pain and pain relief does not seem to help
- The skin near the treated area is blistered or blackened or the skin becomes sore
- Your child complains of numbness or 'pins and needles' near the treated area or there are signs of muscle weakness or spasm
- The treated area is unusually hot, red and painful and your child is general unwell with a high temperature or not eating or drinking as usual

After sclerotherapy, your child may have a crepe bandage on the area treated. This may be quite tight. The aim of this is to keep the treated veins compressed so that they cannot refill with blood and become stretched or baggy again. Tight bandaging gives them a chance to shrink down following treatment.

If your child usually has a compression garment, you can replace the bandage with your child's usual compression garment. If the garment is still too tight due to the area being swollen, you should keep using the crepe bandage, keeping it as tight as possible, until the compression garment fits again.

When you re-apply the bandage, start at the foot or hand and work towards the body. This will compress the treated veins but still allow blood flow to the limb.

Your child should rest the limb for the first 48 hours where possible and practical, and then be encouraged to mobilise. It is important to start using the limb again as much as possible so that it does not get stiff or weak. Swimming and cycling are good exercises to get your child moving again.

Your sclerotherapy doctor will tell you the length of time your child should wear the compression garment. You can remove it briefly for baths and showers but make sure the water is not too hot as this will increase pain and swelling.

If they usually wear a compression garment, your child can go back to the normal compression garment instructions given previously by the doctors in clinic. They can also go back to normal activities, such as swimming, dancing or outdoor games, that were allowed before treatment.

## What happens next?

The doctors will tell you if your child needs further sclerotherapy procedures and if so, when. Your

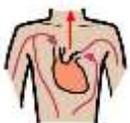
child might need to have a routine outpatient appointment a few weeks afterwards before this decision is made. We will send you a letter with the planned date of the outpatient appointment or next treatment session.

Your child might need several sclerotherapy procedures to reduce the malformation. As sclerotherapy causes swelling and discomfort, it is safer to carry out several smaller treatments limiting the effects each time. Sclerotherapy will not 'cure' the malformation but it should shrink it significantly. Occasionally children need to have further sclerotherapy as they get older.

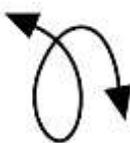
## Useful numbers

- Interventional Radiology department: 020 7829 7943
- Birthmark Unit: 020 7405 9200 extension 1113
- Out of hours, call 020 7405 9200 and ask for the On-call Doctor for Dermatology

## Having sclerotherapy



You have a network of tubes throughout your body. Some are blood vessels that carry blood.



Sometimes these vessels can twist and tangle, which causes problems. Blood might collect in the tangle, causing swelling. The blood could clot, which can be painful.



Sclerotherapy (said scl-air-o-their-ap-ee) uses a medicine injected into the tangle. This annoys the vessels and makes them shrink.



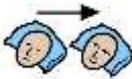
You will have an anaesthetic (said an-ess-thet-ick) for the sclerotherapy. You will not be able to feel anything or know what is happening.



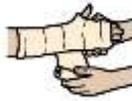
The doctor will use an ultrasound (said: ull-tra-sow-nd) scan to see inside the tangle. Next they will inject some liquid that shows up a different colour on the scan. This gives a picture of the inside of the tangle.



The doctor will inject the medicine in several places in the tangle of vessels. The medicine annoys the tangle of vessels. To begin with, it will make it swell but it will get smaller over the next few weeks.



At the end of the procedure, you will start to wake up from the anaesthetic.



If your arm or leg was injected, the doctor may cover the area with a stretchy bandage.



The nurses will check you regularly to make sure you are getting better. You can then go home.



You might feel a bit sore after the injections. You can take pain medicines if you want.



Please ask us if you have any questions.