

Awake (but with the area numbed with a local anesthetic)

- **There is no fasting:** You (or your child) can eat normally on the day of the procedure.
- **No waiting around at the start:** You and your family member can come to the imaging department at the time of your appointment. This means that there is no waiting around and if you live far away we can arrange an appointment that gives you time to travel here.
- **Less waiting around at the end:** After the procedure we ask you to stay in the radiology department for 30 minutes after your first treatment then you can leave and carry on with your day. There is no drowsiness because you haven't had a general anesthetic. After the next treatment(s) we wouldn't need to observe you, you can leave straight afterwards.
- Being awake means that you know what is happening but you shouldn't feel any pain: After a local anesthetic is given you can feel things (but not pain) and you can see if you like. Lots of young people enjoy watching the imaging on the x-ray machine and have lots of questions!

After the treatment

It is normal to have some pain and swelling for the first few days after the treatment (regardless of whether it has been done with general anesthetic or awake with local anesthetic). Regular children's pain medication (paracetamol and ibuprofen) should be used and you (your child) should rest for the first few days.

For more information on lymphatic malformations:

Please visit - [www.birthmarksupportgroup.org.uk/types-of-birthmark/lymphatic-malformation-\(lm\).aspx](http://www.birthmarksupportgroup.org.uk/types-of-birthmark/lymphatic-malformation-(lm).aspx)

For more information about the Imaging Department and your scan.

Please visit - www.children.nhslothian.scot/the-rhcyp

What if I do not speak English?

If you need help with the English language please phone **0131 312 0896** as soon as possible and we can arrange an interpreter for you.

Information about

Sclerotherapy

for

Lymphatic malformations

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SCAN and Find more
information about
Scans and X-rays

Information for parents and carers -

Lymphatic Malformations

What is a lymphatic malformation?

The lymphatic system is a network of ducts /tubes and lymph nodes; it is part of the body's defense against infection. Sometimes there is an abnormality of these lymphatic ducts in an area of the body because, when they were forming, they didn't form correctly. This causes a collection of lymphatic spaces (cysts) called a lymphatic malformation. There is usually also some additional fatty tissue around the cysts called stroma. The lymphatic malformation, the cysts and stroma, can give the appearance of a lump or swelling under the skin.

How do you diagnose a lymphatic malformation?

We diagnose lymphatic malformations using imaging, usually ultrasound, but sometimes we also use other scans like an MRI.

Can a lymphatic malformation cause other problems?

Sometimes a lymphatic malformation can get suddenly bigger. Usually this is because either the cystic part has become infected or there has been some bleeding into the cysts from the small vessels in the cyst wall. Both of these can be painful but with an infection, the site may also be warm/hot and you (your child) may feel unwell. An infected lymphatic malformation can be treated with antibiotics but it still may take some time to reduce in size even after the infection is treated.

When do you treat lymphatic malformations?

Not all lymphatic malformations need to be treated. Generally treatment is needed if the lymphatic malformation is interfering with important functions (breathing, feeding, movement) or if it is at a site that is awkward, for example if it gets rubbed by clothes or knocked during activities.

What are the treatment options for lymphatic malformations?

- Not all lymphatic malformations can be treated. We work together as a team of specialist doctors to decide, with you, what the best options are for treatment.
- Compression garments are a specially fitted item that is worn tight around the area if the lymphatic malformation - by keeping the cystic spaces squashed it reduces the size of the swelling. Compression garments can be particularly helpful to manage the symptoms (swelling and discomfort) of lymphatic malformations that affect the limbs.
- Surgical removal of lymphatic malformations can sometimes be considered but this leaves a scar and the lymphatic malformations can often be difficult to remove entirely and may reoccur.
- Sclerotherapy is a less invasive way to treat lymphatic malformations.
- Laser therapy can be used to treat some skin changes that result from vascular malformations. Laser therapy uses heat and light to shrivel up the tiny surface veins. This is arranged and performed by a plastic surgeon.

Sclerotherapy

Sclerotherapy is useful when there are prominent cystic spaces in the lesion. Sclerotherapy can be used to reduce the size of a lymphatic malformation by causing the cystic spaces to close up. Sclerotherapy doesn't change the stroma around the cysts so it's not as useful if the lymphatic malformation is mainly stroma or mainly tiny cysts.

During sclerotherapy treatment we (a radiologist = an imaging doctor) inject the lymphatic spaces within the lymphatic malformation with a special medicine called a sclerosing agent. We use ultrasound to make sure we are injecting the right place and we do it as a sterile (clean) procedure.

Sometimes the cysts can get bigger straight after the treatment, usually because injecting can disrupt the lining of the cysts and cause some bleeding, but then the sclerosing agent causes the cysts to close up, so that the overall size of the lymphatic malformation reduces. We usually need to do a course of injections, so about 3 separate injection procedures over about 6 months.

Will I be awake or asleep during sclerotherapy treatment?

You can choose what is best for you and your family. Generally, the sclerotherapy treatments on younger patients are performed asleep, while older and more mature children will have it performed while they are awake. There are a number of things to consider when making this decision:

General anaesthetic (asleep)

- **Fasting:** If sclerotherapy treatment is performed asleep, you will need to come to the hospital for 8am (for a morning list) or 11am (for an afternoon list) and have to fast (not eat anything) from the evening before. The order in which operations on any day are performed is decided on the day and so sometimes you might have to wait (and remain fasted) until the end of the list. Generally, we try and put young children early on the theatre list as they find it hard to be hungry for long periods.
- **Remaining in hospital:** after any anesthetic we like to keep a patient in hospital for observation for around 4 hours. Even after this you/your child will still feel a bit drowsy from the anesthetic.
- **Risk of anesthetic:** Anesthetists (the specialist doctors who put patients to sleep for operations and procedures) are highly skilled and have a lot of experience giving anesthetics to children and it is a safe controlled thing to do but there are always some risks associated with having a general anesthetic.
- **You (or your child) won't be aware of what is happening during the procedure:** This is a good thing for younger children who would not be able to understand what was happening and who could find that stressful.