



Varicocele embolisation

This information sheet explains the procedure varicocele or testicular vein embolisation. It will describe the reasons for the procedure, what to expect and the risk and complications.

Please note that this leaflet is not meant to replace discussion between you and your doctor. You should raise any questions you may have with the doctor who has referred you for, or is performing, the procedure.

What is a varicocele?

A varicocele is a scrotal swelling caused by abnormally enlarged veins in the scrotum. Veins usually have a one-way valve that allows blood to flow from the organ to the heart and not go backwards. If these valves fail the blood pools, in this case around the testicle due to gravity, this leads to the veins enlarging and causing a varicocele.

As the veins become bigger and more obvious, they can cause pain and discomfort. This can present as a “heavy” sensation or feeling of a lump or “bag of worms” in the scrotum. They may become more prominent on standing up and at the end of the day.

Why do I need a varicocele embolisation?

Varicoceles often need no treatment and are not dangerous however if they are causing significant pain or discomfort or you are having trouble with fertility your doctor may recommend treatment.

If you have a varicocele there is an increased risk of subfertility or infertility. Varicoceles may cause decreased sperm count, decreased motility or an increase in the number of deformed sperm. Studies show that treatment can improve pregnancy rates.

Varicoceles may also cause shrinkage of the testicles, known as atrophy, however this can improve following treatment.

How do I prepare for a varicocele embolisation?

Varicocele embolisation is most often undergone as an awake, day case procedure.

You will be given a time for the procedure and asked not to eat for several hours beforehand – this will all be detailed on the letter given to you by the hospital.

When you arrive in the department you will be given a hospital gown and shown to a bed. The nursing and medical staff will go over your medical history and discuss the procedure with you. You will be asked to sign a consent form saying you are happy for the procedure to take place.

The staff involved will regularly ask you to confirm your name and date of birth - don't be alarmed by this; it's a mandatory requirement that we do this for every patient.

Who performs the procedure and where?

The procedure will be carried out by an interventional radiologist, doctors who perform minimal invasive procedure guided by real time imaging such as X-ray, ultrasound or CT. The procedure will usually take place in the Interventional Radiology (IR) department of the hospital in specialist operating theatres with X-ray equipment, also known as IR suites or labs.



How is a varicocele embolisation performed?

You will be asked to lie down on the X-ray table on your back. The doctor or nurse may insert a small needle into the vein of your arm to give you painkillers or sedation, however these are rarely required.

Your breathing rate, pulse and blood pressure will be monitored throughout the procedure.

The procedure can be performed via the veins in the groin, neck or arm. Once the site is chosen it will be cleaned with skin cleaning solution and sterile drapes will be laid around the area in question.

Local anesthetic will be used to numb the skin and deeper tissues.

Once the anesthetic has taken effect a needle will be placed in the vein at the site of the initial puncture and a plastic tube called a sheath placed over a guidewire. This sheath then stays in place and all the equipment used is passed through it.

Under the guidance of X-ray and using dye injected into the vein to show the way, the radiologist will insert a thin tube called a catheter into the veins leading away from the varicocele. Once in the correct position, they will insert material to block the veins. This can be small metallic coils, glue, foam or a combination of these. Your doctor will discuss what they plan to use in advance with you.

Once in place these cause the blood in the veins to clot, blocking off the vein.

Before completing the procedure, the radiologist will check the procedure has been successful by injecting further dye and making sure it doesn't pass down into the scrotum.

Once they are happy, the tubes and wires will be removed, and the doctor will push down on the puncture site for several minutes to ensure there is no bleeding or bruising.

What are the potential risk/complications of the procedure?

This is a very safe procedure. Minor complications include bruising at the site of the needle puncture and pain/discomfort after the operation. If the skin surrounding the needle puncture becomes red and hot, this might be a sign of an infection and you may need a short course of antibiotics.

There is a risk of an allergic reaction to the dye used in the procedure. All the staff are trained in dealing with allergic reactions quickly and efficiently.

Other very rare complications include damage to the walls of the vein which can lead to back pain for a few days, or a collection of fluid in the testes known as a hydrocele. Hydrocele formation is much more common with surgical procedures than with this minimally invasive procedure.

There is a chance that the procedure will not improve your symptoms or that they recur. This can happen if there are other veins supplying the testicle and a repeat procedure may be required. Sometimes the varicocele is not causing the symptoms and therefore treating this does not improve things.



What happens after the procedure?

After the procedure you will be observed for a period, the length of time depends on if you required sedation. During this time your blood pressure and pulse will be checked regularly.

If your observations remain stable and you are feeling well you will be discharged and allowed home.

If it has been decided you require longer in hospital to recover you will be moved to a ward.

Once you are home, you should not do any heavy lifting for 2 to 3 days. You should also keep the puncture site dry for 24 hours.

You will be given a clinic appointment for follow up at least 2 months later. This is because it can take several months for the swelling to shrink, so don't worry if this takes longer than expected.

Notes