Varicocele Embolisation

Interventional Radiology

This leaflet explains the procedure testicular vein embolisation or varicocele 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 with the doctor 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.

What is a varicocele embolisation?

Varicocele embolisation is a minimally invasive procedure used to treat a varicocele by blocking the affected veins. This reduces abnormal blood flow and relieves pressure within the scrotal veins.

Why do I need a varicocele embolisation?

You may be offered varicocele embolisation if:

- You have testicular pain or discomfort related to a varicocele
- A varicocele is thought to be contributing to infertility
- There is testicular shrinkage associated with a varicocele
- You wish to avoid surgery or general anaesthetic
- A previous surgical repair has not been successful

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How do I prepare for a varicocele embolisation?

You will have a **pre-assessment telephone consultation** with a nurse before your admission and may be asked to have blood tests before the procedure.

You should **stop eating 6 hours prior the procedure**, however you can drink 1 cup of clear water per hour until the procedure starts.

As it's a day case procedure, you need to arrange for an adult to collect you from the department and someone to stay with you overnight.

The procedure will take place in the Interventional Radiology (IR), within the Radiology Department at St. Peter's Hospital. When you arrive, you will be given a hospital gown to change into, and a staff will insert an IV cannula.

The doctor will discuss the procedure with you; answer any questions you may have and ask you to sign the consent form if you are happy to proceed.

The procedure will likely be performed under local anaesthetic. Intravenous pain relief and light sedation may also be given, to ensure you are as comfortable as possible.

If you are feeling unwell closer to the day of the procedure, please let the team know.

How is a varicocele embolisation performed?

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

You will lie on a procedure table. The skin is cleaned and numbed with local anaesthetic.

A small catheter is inserted into a vein (usually in the groin or neck). X-ray contrast is injected to identify the veins causing the varicocele. Sometimes this contrast can cause a hot feeling or the sensation that you have passed urine. Small coils, plugs, or a special liquid agent are then used to block the abnormal veins.

Once the veins are successfully treated, the catheter is removed and pressure is applied to the access site.

The procedure usually takes 30-60 minutes.

What are the potential risk / complications of the procedure?

Varicocele embolisation is a safe and effective procedure. However, as with all medical procedures, there are some risks:

Pain or discomfort

- Mild pain or aching in the groin, abdomen, or scrotum is common for a few days after the procedure.
- This can be managed with simple pain relief.

Bruising or bleeding

- Bruising or mild bleeding at the access site occurs in up to **5-10%** of patients and usually settles without treatment.

Infection

- Infection is rare (**<1%**) but may require antibiotics if it occurs.

Post-embolisation symptoms

- A dull ache or mild inflammatory discomfort may occur in the treated veins for a few days and usually resolves on its own.

Coil or embolic material movement

- Movement of coils or embolic material is rare (**<1%**) and may require further treatment if it occurs.

Recurrence or persistence of varicocele

- In a small number of patients (**5-10%**), the varicocele may persist or recur and may require further treatment.

Injury to nearby structures

- Damage to nearby blood vessels is rare (**<1%**), as imaging guidance is used.

Radiation exposure

- The procedure uses X-ray guidance. The radiation dose is kept as low as reasonably achievable.

What happens after the procedure?

After the procedure:

- You will be monitored in a recovery area 2h
- Most patients can go home the same day

You should:

- Rest for 24-48 hours
- Avoid heavy lifting and strenuous exercise for 5-7 days
- Keep the access site clean and dry for 48h

Mild scrotal discomfort can be managed with simple pain relief and supportive underwear.

When should I seek medical advice?

Contact your healthcare team if you experience:

- Increasing pain, swelling, or redness in the groin or scrotum
- Fever or chills
- Excessive bleeding or swelling at the access site
- Worsening testicular pain

Follow-up

Follow-up arrangements will be discussed with your referring consultant. Improvement in symptoms may take several weeks.

Further Information

We endeavour to provide an excellent service at all times, but should you have any concerns please, in the first instance, raise these with the Matron, Senior Nurse or Manager on duty. If they cannot resolve your concern, please contact our Patient Experience Team on 01932 723553 or email asp-tr.patient.advice@nhs.net. If you remain concerned, the team can also advise upon how to make a formal complaint.

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