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Maltese Association of Radiologists
and Nuclear Medicine Physicians

Varicocele Embolisation

Overview

A varicocele is an enlargement of the veins in your scrotum. To ensure that blood flows in only one direction, these veins have valves which prevent blood from flowing backwards. If you have a varicocele, this means that these valves are not working, causing blood to remain stagnant in the scrotum. It is similar to a varicose vein, which can occur in legs.

If you have a varicocele, this may affect your fertility, as varicoceles can cause low sperm production, decreased sperm quality and testicular atrophy.

Symptoms

Generally, varicoceles are asymptomatic, meaning that patients do not experience any symptoms, but in some cases they can cause pain, which can vary from a dull, heavy discomfort to a sharp pain.

If you do experience pain, you may find that the pain increases with exercise and movement, and that it gets worse over time, as symptoms often get worse over the course of the day. You may experience relief from the pain when you lie on your back.

Diagnosis

Your doctor can diagnose you using ultrasound or after a physical examination. The varicocele will look like a mass in the scrotum.

If you have a clinical examination, you will be asked to take a deep breath and hold it while your doctor feels the scrotum above your testicle. Alternatively, your doctor may use ultrasound to examine the dilation of the veins or to measure the blood flow. These methods allow your doctor to diagnose your varicocele.



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Treatment

If you experience pain, infertility or testicular atrophy caused by a varicocele, you may undergo treatment for it. There are two main options for treatment of a varicocele.

Surgical repair of a varicocele involves a surgeon cutting the veins which supply blood to the varicocele, meaning no blood can reach it. It may be performed under local or general anaesthetic.

Minimally invasive percutaneous embolisation is a procedure in which an interventional radiologist will insert a special catheter (tube) into your groin or arm and guide this under imaging to the affected vein. The interventional radiologist will then use a liquid agent or tiny metal coils to block blood flow to the vein with the varicocele. This treatment is as effective as surgery, but has less risk, pain and recovery time.

What is varicocele embolisation?

Varicocele embolisation is a minimally invasive procedure which is used to treat abnormal enlargement of the veins which drain the testicles, which are known as varicocele. The procedure works by blocking the blood flow to the enlarged vein, which reduces pressure on the varicoceles.

How does the procedure work?

The interventional radiologist will usually insert a 2-3 mm catheter (tube) into a blood vessel in your groin and will then guide the catheter under image guidance to the affected blood vessel. This will be followed by the interventional radiologist delivering glue or coils (small metal spirals) to the enlarged vessels. This will relieve your symptoms by blocking the blood vessel and reducing blood flow.



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Why perform it?

If you have a varicocele, it is recommended that you seek treatment when you experience clinical symptoms such as pain in your scrotum, a feeling of heaviness in your testicle, you can see or feel the enlarged veins within your scrotum, or you experience infertility as a consequence of the varicocele.

What are the risks?

Minor risks include bruising in the groin.

There is also a very small risk that the embolic material used to treat the bleed get dislodged, moving to other areas of the body and thereby blocking other artery branches.

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References

www.cirse.org