

Prostate artery embolisation

Radiology Department Patient Information Leaflet

Introduction

This leaflet tells you about having prostate artery embolisation (PAE). It explains what is involved and what the possible risks are. It is not meant to replace informed discussion between you and your doctor, but can act as a starting point for such discussions. If you have any questions about the procedure, please ask the doctor who has referred you or the department which is going to perform it.

What is prostate artery embolisation (PAE)?

PAE is a non-surgical way of treating an enlarged and troublesome prostate gland by blocking off the vessels that feed the gland, making it shrink. It is performed by an interventional radiologist (image-guided surgeon) rather than a urologist, and is an alternative to a transurethral resection of prostate (TURP) or other prostate operations, including laser surgery.

PAE was first performed in 2009, and since then over 900 men have had the procedure performed, predominantly in Portugal, Brazil and the USA. The procedure has also been performed in the UK under the Registry of Prostate Embolisation (ROPE) registry trial, showing good results with similar symptomatic improvement compared to TURP, and less complications.

Why might I need prostate artery embolisation?

Other tests that you have had done will have shown that you are suffering from an enlarged prostate, and that this is causing you considerable symptoms. Your urologist and your GP should have told you all about the ways of dealing with this, usually starting with medication. Previously, most severe prostatic symptoms have been treated by a TURP operation. In your case, it has been decided that embolisation is an alternative treatment worth considering.

Who has made the decision?

The urologist and interventional radiologist will have discussed your situation and have decided that you could consider embolisation under the care of the interventional radiologist as a treatment option for your enlarged prostate gland. However, it is very important that you have had the opportunity for your opinion to be taken into account.

If, after full discussion with your doctors, you do not want the PAE carried out, then you must decide against it.

Who will be doing the procedure?

Specially trained doctors called interventional radiologists (image-guided surgeons) will be doing the procedure. Interventional radiologists have special expertise in using X-ray equipment, and also in interpreting the images produced. They need to look at these images while carrying out the procedure. Consequently, interventional radiologists are the best trained people to insert needles and fine catheters into blood vessels through the skin, and place them correctly.

The procedure takes place in a specialised X-ray room called an interventional radiology theatre.

How do I prepare for prostate artery embolisation?

You need to be admitted to the hospital, usually as a day case patient. You will probably be asked not to eat for four hours beforehand, though you may be told that it is alright to drink some water. You may receive a sedative to relieve anxiety, but the procedure is normally performed under local anaesthesia. You will be asked to put on a hospital gown. The procedure is generally carried out using the artery in the groin or wrist.

If you have any allergies, you must let your doctor know. If you have previously reacted to contrast medium (the dye used in CT scanning) then you must also tell your doctor about this.

What happens during prostate artery embolisation?

You will lie on the X-ray table, generally flat on your back. You may need to have a urinary catheter inserted prior to the procedure (if there is not already one in place) as this acts as a guide for the embolisation procedure. You may need to have a needle put into a vein in your arm so that you can have a sedative and painkillers if required. You may also have a monitoring device attached to your chest and finger, and we may give you oxygen through small tubes in your nose.

The interventional radiologist will keep everything sterile and will wear a theatre gown and operating gloves. The skin near the point of insertion, groin or wrist, will be cleaned with antiseptic and covered with a theatre drape.

The skin and deeper tissues over the artery in the groin or wrist will be anaesthetised with local anaesthetic, and then a needle will be inserted into this artery.

Once the interventional radiologist is satisfied that this is correctly positioned, a guide wire is placed through the needle and into this artery. Then, the needle is withdrawn, allowing a fine, plastic tube called a catheter to be placed over the wire and into this artery. The interventional radiologist will use the X-ray equipment to make sure that the catheter and the wire are then moved into the correct position, into the other arteries which are feeding the prostate. These arteries are quite small and rather variable. A special X-ray dye, called contrast medium, is injected down the catheter into these prostate arteries, and this may give you a hot feeling in the pelvis.

The interventional radiologist may then perform a CT scan-like technique, where the X-ray tube rotates around the table and the images are then processed by a powerful computer to make sure no abnormal arterial connections are present. Once the prostate blood supply has been identified, fluid containing thousands of tiny particles is injected through the catheter into these small arteries which nourish the prostate. This silts up these small blood vessels and blocks them so that the prostate is starved of its blood supply.

Both the right and the left prostatic arteries need to be blocked in this way. It can often all be done from a single artery puncture, but occasionally two are required. At the end of the procedure, the catheter is withdrawn, and pressure is applied to prevent any bleeding.

Will it hurt?

When the local anaesthetic is injected, it will sting for a short while, but this soon wears off. You may have a small bruise after the procedure. Sometimes, patients may experience some pelvic pain after the procedure, which is normal post-embolisation pain and may last for one to three days. This can normally be controlled with simple oral analgesic tablets e.g. paracetamol.

How long will it take?

Every patient is different, and it is not always easy to predict. However, expect to be in the radiology department for about two to three hours.

What happens afterwards?

Following the procedure, you will be taken back to an observation area/ward where you will be looked after by nursing staff familiar with the procedure. They will carry out routine observations, including your pulse and blood pressure.

Are there any risks?

Prostate artery embolisation is a fairly new procedure which the National Institute for Health and Care Excellence (NICE) has deemed safe, but there are some risks and complications that can arise, as with any medical treatment.

There may occasionally be a small bruise, called a haematoma, at the site of needle puncture into the artery, and this is quite normal. If this becomes a large bruise, then there is a risk of infection, and antibiotics may be required.

Most patients feel some pain afterwards, but this is usually mild.

Occasionally, a urinary catheter may need to be placed for retention.

Non-target embolisation with damage to the bladder and rectum has been seen very rarely in larger overseas series. Although potentially serious, these risks are very uncommon and will be discussed at the time of your consent for treatment.

X-ray precautions

The procedure uses X-rays, and these use a small amount of radiation which may add slightly to the normal risk of cancer.

Your doctor thinks that the benefit of the examination outweighs the risks. However, if you are concerned about these possible risks, please discuss these with this doctor.

For more information, visit:

<https://www.gov.uk/government/publications/medical-radiation-patient-doses/patient-dose-information-guidance>

What are the results?

Although it is a relatively new procedure, we know that over 70 per cent of men will gain symptomatic improvement after PAE with reduction in prostate volumes and an increase in urinary flow rates. Difficulty in finding tortuous or small prostate arteries may lead to technical failures in around 10 per cent of cases. In case of failure, traditional TURP surgery may be offered.

Potential benefits of PAE over surgery are fewer and less serious complications. Traditional surgical options may result in heavy bleeding or retrograde ejaculation leading to loss of sexual function or fertility. This can be avoided with PAE. Also, PAE can be performed as a day case procedure (compared to a possible three to four day hospital stay with surgery) and can avoid the need for a general anaesthetic.

Finally

Some of your questions should have been answered by this leaflet, but remember that this is only a starting point for discussion about your treatment with the doctors looking after you. Make sure you are satisfied that you have received enough information about the procedure.

Contact

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