1 Prostate artery embolisation

The following information about prostate artery embolisation (PAE) explains what is involved and the possible risks. It is not meant to be a substitute for informed discussion between you and your doctor, but can act as a starting point for such a discussion.

It is almost certain that you are having the PAE done as a pre-planned procedure, in which case you should have plenty of time to discuss the situation with your urology consultant and the interventional radiologist who will be performing the procedure, and perhaps even your own GP.

If having PAE as part of the National PAE Registry (UK-ROPE), you will be given further details about this NICE/BSIR/BAUS funded study.

If you need the PAE as an emergency, then there may be less time for discussion, but none the less you should have had sufficient explanation before you sign the consent form.

2 What is prostate artery embolisation?

PAE is a non-surgical way of treating an enlarged and troublesome prostate by blocking off the arteries that feed the gland and making it shrink. It is performed by an interventional radiologist, rather than a surgeon, and is an alternative to a TURP (trans urethral resection of prostate) 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. In UK the University Hospital Southampton has been offering a PAE service from April 2012 as part of a closely monitored clinical introduction and the team there has performed over 50 cases to date.

3 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.

4 Who has made the decision?

The doctors in charge of your case, and the interventional radiologist doing the prostate embolisation, will have discussed the situation, and feel that this may be the most suitable treatment. However, it is very important that you have had the opportunity for your opinion to be taken into account, and that you feel quite certain that you want the procedure to go

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

5 Who will be doing the prostate artery embolisation?

Specially trained doctors called interventional radiologists. 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.

6 Where will the procedure take place?

Generally in the X-ray department, in a special screening room, which is adapted for specialised interventional procedures. It is often referred to as a Catheter or ‘Cath’ Lab.

7 How do I prepare for prostate artery embolisation?

You need to be admitted to the hospital. This can be done as a day case procedure or with an overnight stay if you are travelling or are on your own at home. 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. You will be asked to put on a hospital gown. As the procedure is generally carried out using the big artery in the groin, you may be asked to shave the skin around this area on each side.

If you have any allergies, you must let your doctor know. If you have previously reacted to intravenous contrast medium, the dye used for kidney x-rays and CT scanning, then you must also tell your doctor about this.

8 What actually happens during prostate artery embolisation?

You will lie on the X-ray table, generally flat on your back. You need to have a needle put into a vein in your arm, so that the radiologist can give you a sedative and painkillers if required. Once in place, this will not cause any pain. You may also have a monitoring device attached to your chest and finger, and may be given oxygen through small tubes in your nose. The interventional radiologist will keep everything as sterile as possible, and will wear a theatre gown and operating gloves. The skin near the point of insertion, probably the right and/or left groin, will be swabbed with antiseptic, and then most of the rest of your body covered with a theatre towel.

The skin and deeper tissues over the artery in the groin 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. Two interventional radiologists will usually be performing the case. 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 radiologist may then perform a CT scan like technique where the Xray 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 the right groin, but sometimes it may be difficult to block the branches of the right prostatic artery from the right groin, and so a needle and catheter needs to be inserted into the left groin as well. At the end of the procedure, the catheter is withdrawn and the interventional radiologist or nurse then presses firmly on the skin entry point for several minutes, to prevent any bleeding.

9 Will it hurt?

When the local anaesthetic is injected, it will sting to start with, but this soon passes, and the skin and deeper tissues should then feel numb. The procedure itself may become painful. Pain during prostate embolisation is much less common than many other embolisation procedures. However, there will be a nurse, or another member of staff, standing next to you and looking after you. If the procedure does become too painful for you, then they will be able to arrange for you to have some painkillers through the needle in your arm.

As the dye, or contrast medium, passes around your body, you may get a warm feeling, which some people can find a little unpleasant. However, this soon passes and should not concern you.

10 How long will it take?

Every patient’s situation is different, and it is not always easy to predict how complex or how straightforward the procedure will be. Some prostate artery embolisations do not take very long, perhaps an hour. Other embolisations may be more involved, and take rather longer, perhaps up to 2-3 hours. As a guide, expect to be in the X-ray department for about 3 hours.

11 What happens afterwards?

You will be taken back to the recovery area on a trolley. Nurses in the recovery area will carry out routine observations, such as taking your pulse and blood pressure, to make sure that there are no untoward effects. They will also look at the skin entry point to make sure there is no bleeding from it. Once any pain is controlled you will be transferred to the ward. You will generally stay in bed for a few hours, until you have recovered. If suitable for a day case procedure you will usually be allowed home after four to six hours. If not you will be kept in hospital overnight. Once you are home, you should rest for three or four days. You will be prescribed painkillers if required and other drugs, including antibiotics and an explanation of their usage will be given prior to your discharge.

12 Are there any risks or complications?

Prostate artery embolisation is a fairly new procedure. From the published data It appears to be 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, around the site where the needle has been inserted, and this is quite normal. If this becomes a large bruise, then there is the risk of it getting infected, and this would then require treatment with antibiotics.

Most patients feel some pain afterwards; this is usually mild. Very occasionally a urinary catheter may need to be placed.

Non target embolisation with damage to the bladder and rectum have been seen very rarely in larger overseas series. These risks appear small and will be discussed at the time of your consent for treatment.

13 What else may happen after this procedure?

Some patients may feel very tired for up to a week following the procedure, though some people feel fit enough to return to work three days later. However, patients are advised to take at least one week off work following PAE.

14 What are the results of prostate artery embolisation?

There are a few medium term studies and one randomised controlled trial of the results of prostate artery embolisation. Over 70% 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% of cases. In case of failure traditional TURP surgery may be offered.

Some of your questions should have been answered by this information, but remember that this is only a starting point for discussion about your treatment with the doctors looking after you. Do satisfy yourself that you have received enough information about the procedure, before you sign the consent form.

PAE is probably a safe procedure, designed to improve your medical condition and save you having a larger operation. There are some risks and complications involved, and you do need to make certain that you have discussed all the options available with your doctors.

Dr Nigel Hacking,

BSIR

UK-ROPE committee

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