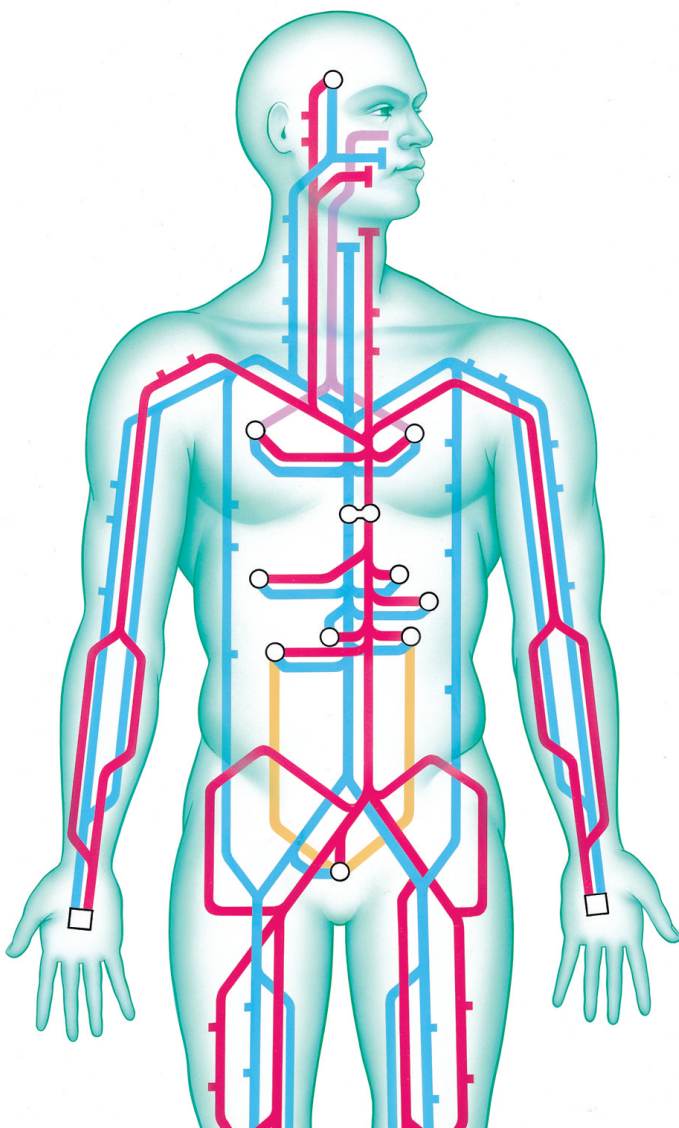


PERCUTANEOUS NEPHROSTOMY



MEDICAL IMAGING
INFORMATION FOR PATIENTS

Introduction

This booklet tells you about the procedure known as percutaneous nephrostomy, 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 discussion.

If the percutaneous nephrostomy is being done as a pre-planned procedure, you should have plenty of time to discuss the matter with your consultant and the radiologist who will be doing the percutaneous nephrostomy, and perhaps even your own GP. If you need the nephrostomy as an emergency, there may be less time for discussion, but nevertheless you should have had sufficient explanation before you sign the consent form for the procedure.

What is a percutaneous nephrostomy?

The urine from the normal kidney drains through a narrow muscular tube (the ureter) into the bladder. When that tube becomes blocked, for example by a stone or a blood clot, the kidney can rapidly become affected, especially if there is infection present as well. While an operation may become necessary, it is also possible to relieve the blockage by inserting a fine plastic tube, called a catheter, through the skin, into the kidney, under local anaesthetic. This catheter then allows the urine to drain from the kidney into a collecting bag, outside the body. This procedure is called a percutaneous (meaning 'through the skin') nephrostomy (a tube put into the kidney).

Why do I need a percutaneous nephrostomy?

Other tests will have shown that the tube leading from your kidney to the bladder has become blocked. However, it may not be obvious what the cause of the blockage is. If left untreated, your kidney will become damaged.

Who has made the decision?

The doctors in charge of your case, and the radiologist who will be doing the percutaneous nephrostomy, will have discussed the matter, and feel that this is the best treatment option. However, you will have the opportunity to have your opinion taken into account and if, after discussion with your doctors, you do not want the procedure carried out, then you can decide against it.

Who will be doing the percutaneous nephrostomy?

A specially-trained doctor called a Radiologist. Radiologists have special expertise in the use of X-ray equipment and also in interpreting the images produced. They need to look at these images while carrying out the procedure. Radiologists are the best-trained people to insert needles and tubes into the body, through the skin, and place them correctly.

Where will the procedure take place?

Usually in the X-ray department, in a special 'screening room', which is adapted for specialised procedures.

How do I prepare for a percutaneous nephrostomy?

You need to be an inpatient in the hospital. You will probably be asked not to eat for four hours before the procedure, though you may be allowed to drink some water. You may receive a sedative to relieve anxiety, as well as an antibiotic. You will be asked to put on a hospital gown.

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 scans), you must also tell your doctor about this.

What actually happens during a percutaneous nephrostomy?

You will lie on the X-ray table, normally flat, or nearly flat, on your stomach. You will need to have a needle put into a vein in your arm, so that the radiologist can give you a sedative or painkillers. Once in place, this needle will not cause you any pain. You will also have a monitoring device attached to your chest and finger, and your blood pressure will be monitored.

The radiologist will keep everything as sterile as possible, and will wear a theatre gown and operating gloves. Your skin will be cleaned with an antiseptic solution, and most of the rest of your body will be covered with a theatre towel.

The radiologist will use the X-ray equipment or the ultrasound machine to decide on the most suitable point for inserting the fine plastic tube (the catheter), usually in your back, just below the twelfth rib. Then your skin will be anaesthetised with local anaesthetic and a fine needle will be inserted into your kidney.

When the radiologist is sure that the needle is in a satisfactory position, a guide wire will be placed into the kidney, through the needle, which enables the plastic catheter to be positioned correctly. This catheter will then be fixed to the skin surface and attached to a drainage bag. In some cases a plastic tube called a stent, may be placed across the obstruction to relieve the blockage.

Will it hurt?

Unfortunately, it may hurt a little, for a very short period of time, but any pain you have should be controlled with painkillers. When the local anaesthetic is injected, it will sting at first, but this soon wears off and the skin and deeper tissues should then feel numb. Later, you may be aware of the needle and then the catheter passing into the kidney, and sometimes this is painful, especially if the kidney was sore to begin with. There will be a nurse or another member of the clinical staff standing next to you and looking after you. If the procedure does become painful, they will be able to arrange for you to have some painkillers through the needle in your arm.

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. It may be over in 20 minutes, but very occasionally it may take 90 minutes, or even longer. As a guide, expect to be in the X-ray department for about an hour altogether.

What happens afterwards?

You will be taken back to your ward on a trolley. Nurses on the ward will carry out routine observations, such as taking your pulse and blood pressure, to make sure that there are no problems. You will normally stay in bed for a few hours, until you have recovered. Usually for the first 24 hours there will be blood in the urine.

The drainage catheter stays in place in your body for a time, and will be attached to a collection bag. You will be able to carry on a normal life with the catheter in place. However, it is important that you try not to make any sudden movements, for example getting up out of a chair, without remembering about the bag, and making sure that it can move freely with you. The bag needs to be emptied fairly frequently, so that it does not become too heavy, and the nurse will want to measure the amount that is in it each time.

How long will the catheter stay in, and what happens next?

These are questions that only the doctors looking after you can answer. It may need to stay in for only a short time, for example while a stone passes naturally, or it may need to stay in for a much longer period, to allow a more permanent solution to the blockage to be organised.

Are there any risks or complications?

Percutaneous nephrostomy is a very safe procedure, but as with any medical treatment, there are some risks and complications that can arise.

Perhaps the biggest problem that might arise is being unable to place the drainage tube satisfactorily in the kidney. If this happens, a surgeon may arrange another method of overcoming the blockage, which may involve surgery. Sometimes there is a leak of urine from the kidney, resulting in a small collection of fluid inside the abdomen. If this becomes a large collection, it may require draining. There may be slight bleeding from the kidney. On very rare occasions, this may become severe, and require a surgical operation or another radiological procedure to stop it. Occasionally, there may be infection in the kidney, or in the space around it. This can usually be treated satisfactorily with antibiotics.

Despite these possible complications, percutaneous nephrostomy is normally very safe, and will almost certainly result in a great improvement in your medical condition. Very occasionally, an operation is required, but if the percutaneous nephrostomy had not been attempted, this operation would have been necessary anyway.

Finally...

Some of your questions should have been answered by this booklet, but remember that this is only a starting point for discussion about your treatment with the doctors looking after you.

Do please satisfy yourself that you have received enough information about the procedure, before you sign the consent form.

Percutaneous nephrostomy is considered a very safe procedure, designed to save you having a larger operation. As with all operative procedures, some slight risks and complications are involved, and although it is difficult to say exactly how often these occur, they are normally minor in nature and happen only rarely.

If you require any further information about your procedure please contact (01302) 366666 and ask for bleep 1495.