

Percutaneous Nephrostomy

Introduction

This leaflet tells you about the procedure known as a 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 a discussion.

If the Percutaneous Nephrostomy is being done as a pre-planned procedure, then you should have plenty of time to discuss the situation 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, then there may be less time for discussion, but none the less you should have had sufficient explanation, before you sign the consent form.

What is a Percutaneous Nephrostomy?

The urine from a normal kidney drains through a narrow, muscular tube, the ureter, into the bladder. When that tube becomes blocked, for example by a stone or 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 doing the Percutaneous Nephrostomy will have discussed the situation, and feel that this is the best treatment option. However, you will also have the opportunity for your opinion to be considered, 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 an **Interventional Radiologist**. **Interventional** Radiologists have special expertise in using x-ray and scanning 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 tubes into the body, through the skin, and place them correctly.

Where will the procedure take place?

Generally in the x-ray department, in a specialised "screening" room using x-ray and ultrasound equipment, or sometimes in the CT scanning room.

How do I prepare for Percutaneous Nephrostomy

You need to be an inpatient in the hospital. You will probably be asked not to eat for four hours beforehand, 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 scanning, then you must tell your doctor about this.

What actually happens during a Percutaneous Nephrostomy?

You will lie on the x-ray table, generally flat on your stomach, or nearly flat. You 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 does not cause any pain. You will also have a monitoring device attached to your chest and finger, and will probably receive oxygen through small tubes in your nose.

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

The radiologist will use the x-ray equipment **and/or an ultrasound machine** to decide on the most suitable point for inserting the fine plastic tube (catheter), usually in your back, just below your twelfth rib. Then your skin will be anaesthetised with local anaesthetic, and a fine needle inserted into the 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 then enables the plastic catheter to be positioned correctly. This catheter will then be fixed to the skin surface, and attached to a drainage bag.

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 to start with, 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 start with. There will be a nurse, or another member of clinical staff, standing near by and looking after you. If the procedure does become painful for you, then they will be able to arrange for you to have more painkillers through the needle in your arm.

Generally, placing the catheter in the kidney only takes a short time and once in place it should not hurt.

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, or very occasionally it may take longer than 90 minutes. 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 generally stay in bed for a few hours, until you have recovered.

The drainage catheter stays in place in your body for the time being 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, but the nurses will want to measure the amount in it each time.

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

These are questions which only the doctors looking after you can answer. It may only need to stay in 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 for the blockage to be organised.

Are there any risks or complications?

Percutaneous Nephrostomy is a very safe procedure, but there are some risks and complications that can arise, as with any medical treatment. Perhaps the biggest problem is being unable to place the drainage tube satisfactory in the kidney. If this happens, a surgeon will 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 generally be treated satisfactorily with antibiotics.

Despite these possible complications, the procedure 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, then this operation would have been necessary anyway.

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, before you sign the consent form. **Although you will sign a consent form for this treatment, you may at any time after that withdraw such consent. Please discuss this with your medical team.**

Percutaneous Nephrostomy is considered a very safe procedure, designed to save you having a larger operation. There are some slight risks and possible complications involved, and although it is difficult to say exactly how often these occur, they are generally minor and do not happen very often.

Sources of information

This leaflet is based on information from Clinical Radiology Patients Liaison Group (CRPLG) of The Royal College of Radiologists and the British Society of Interventional Radiology (BSIR) who have given their permission for it to be reproduced.

Important information

Please remember that this leaflet is intended as general information only. It is not definitive. We aim to make the information as up to date and accurate as possible, but please be warned that it is always subject to change. Please, therefore, always check specific advice on the procedure or any concerns you may have with your doctor.

Your comments

We are always interested to hear your views about our leaflets. If you have any comments, please contact the Patient Experience Team on 01323 417400 Ext: 5860 or by email at: **esh-tr.patientexperience@nhs.net**

Hand hygiene

The Trust is committed to maintaining a clean, safe environment. Hand hygiene is very important in controlling infection. Alcohol gel is widely available at the patient bedside for staff use and at the entrance of each clinical area for visitors to clean their hands before and after entering.

Other formats

If you require any of the Trust leaflets in alternative formats, such as large print or alternative languages, please contact the Equality and Human Rights Department.

Tel: 01424 755255 Ext: 2620

After reading this information are there any questions you would like to ask? Please list below and ask your nurse or doctor.

Reference

The following clinicians have been consulted and agreed this patient information:
Dr Giles; Consultant Radiologist, Dr Mo Faris; Consultant Radiologist, Dr Neal Barlow;
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