

Antegrade Ureteric Stenting

Introduction

This leaflet tells you about the procedure known as antegrade ureteric stenting, 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 antegrade ureteric stenting 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 procedure, and perhaps even your own GP. If you need the stent 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 antegrade ureteric stenting?

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 tumour, 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 long plastic tube, called a stent, through the skin, into the kidney and then down the ureter, under local anaesthetic.

This stent then allows urine to drain in the normal fashion, from the kidney into the bladder.

Why do I need antegrade ureteric stenting?

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. An operation may be necessary to provide a permanent solution to the blockage, but in the meantime, insertion of a stent will allow the kidney to drain in a normal way.

What are the options or alternatives?

The alternatives include passing a stent from the bladder up into the kidney. This may have been tried and failed or thought not to be the best treatment for you. The only other alternative is an open operation, again this may not be possible or felt to be unsafe.

Who has made the decision?

The consultant in charge of your case, and the radiologist performing the antegrade ureteric stenting will have discussed your case, 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, you can decide against it.

Who will be performing the antegrade ureteric stenting?

A specially trained doctor called a radiologist. Radiologists have special expertise in using x-ray and scanning equipment, and also in interpreting

the images produced. They will look at these images while carrying out the procedure.

Radiographers and radiology nurses will be present in the room to assist during the procedure, they will introduce themselves at the start of the procedure.

Occasionally student radiographers or medical students will be present to observe the procedure.

Where will the procedure take place?

Generally, in the Medical Imaging Department.

How do I prepare for antegrade ureteric stenting?

- You may need to be an inpatient in the hospital.
- You will have had some blood tests performed before the procedure to check that you do not have an increased risk of bleeding.
- You are asked not to eat for 4 hours prior to the procedure. You may drink a little water.
- If you have any allergies or you have previously reacted to intravenous contrast medium, you must let the doctor know. Intravenous contrast medium is the injection we give you during some scans.
- If you are diabetic, please contact the Medical Imaging Department on **01392 402336 selecting option 2, in-patient enquiries and then option 6 for Interventional Radiology.**
- If you normally take any medication to thin your blood (anticoagulation or antiplatelet drugs) such as: **warfarin / clopidogrel / aspirin / non-steroidal anti-inflammatory drugs (NSAIDS / brufen / ibrufen / nurofen) / dabigatran (Pradaxa) / rivaroxiban (Xarelto) / Apixaban (Eliquis) / phendione / acenocoumarol** – then these may need to be stopped or altered. Please seek the advice of your hospital consultant or nurse specialist as soon as possible, ask your GP, or contact the Medical Imaging Department

on **01392 402336 selecting option 2, in-patient enquiries and then option 6 for Interventional Radiology.**

- Other medication should be taken as normal.

What happens during antegrade ureteric stenting?

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 pain relief. Once in place, this needle does not cause any pain. You will also have a monitoring device attached to your chest and finger, and may receive oxygen through small tubes in your nose.

The radiologist will keep everything sterile, and will wear a theatre gown and operating gloves. Your skin will be cleaned with antiseptic, and then 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 stent into the kidney, 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, and then passed down the ureter. Once the wire has been placed through the blockage and into the bladder, the long plastic stent can be placed over the guide wire, and the wire withdrawn. Urine should then be able to pass down the stent and into the bladder. As a temporary measure, it may be necessary to leave a fine plastic drainage tube, called a catheter, in the kidney to allow urine to drain externally. This catheter will then be fixed to the skin surface, and attached to a drainage bag.

Will it hurt?

You may experience some discomfort for a short period of time, but this should be controlled with pain relief.

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 stent passing into the kidney, and sometimes this is uncomfortable, especially if the kidney was sore to start with. There will be staff looking after you throughout the procedure. If it does become painful for you, then they will be able to arrange for you to have more pain relief through the needle in your arm. Generally, placing the stent in the ureter only takes a short time, and once in place it should not hurt at all.

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 completed in 20 minutes, if you already have a nephrostomy tube in place, or very occasionally it may take longer than 90 minutes. As a guide, expect to be in the Medical Imaging Department for a few hours 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.

If you have an external drainage catheter, then this will stay in place for the time being, and will be attached to a collection bag. 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. The urine in the bag will be blood-stained especially for the first 24 hours.

What will happen to the results?

A report of the procedure will be recorded on your electronic patient record immediately for review by your specialist.

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

These are questions which only the doctors looking after you can answer. The drainage catheter may only need to stay in a short time. Taking this out will not hurt. You will be able to carry on a normal life with the catheter and the stent in place. The stent may stay in position for a much longer period of time, depending on the nature of the blockage and whether any operation is being considered.

Are there any risks or complications?

Antegrade ureteric stenting is a very safe procedure, but there are some risks and complications that can arise. Perhaps the biggest problem is being unable to place the stent satisfactorily in the ureter. 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.

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.

Contact us

If you found reading your leaflet difficult, you do not understand what it means for you, if you have any queries or concerns you can contact us on: **01392 402336** and we can talk it through or alternatively you can email us **rduh.radiologyappointments@nhs.net**.

How to get to the Royal Devon & Exeter Hospital at Wonford

Please refer to the enclosed "Welcome to the Medical Imaging Department" leaflet and use the Trusts website for the latest information:

www.royaldevon.nhs.uk/our-sites

For more information on the Medical Imaging Department, please visit our website:

www.royaldevon.nhs.uk/services/radiology-x-ray-and-medical-imaging

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