

Antegrade ureteric stent insertion

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This patient information tells you about having antegrade ureteric stenting. It explains what is involved and what the possible risks are. It is not meant to replace discussions between you and your doctor but can act as a starting point. If you have any questions about the procedure, please ask the doctor who has referred you or the Interventional Radiology department.

What is antegrade ureteric stenting?

Normally urine from the kidney drains through a narrow muscular tube (the ureter) into the bladder. When, for example, a stone blocks the ureter, the kidney can rapidly become blocked. While an operation may become necessary, it is also possible to relieve the blockage initially by placing a nephrostomy tube and then by inserting a long plastic tube, called a stent, through the nephrostomy tube, into the kidney, through the ureter and to the bladder. The stent allows urine to drain in the normal way, from the kidney into the bladder.

Why do you need antegrade ureteric stenting?

Other imaging tests have shown that the ureter has become blocked. You will have already had a percutaneous nephrostomy placed to relieve the blockage. While a nephrostomy can be a permanent solution, a ureteric stent allows an internal solution without the need for a drainage bag on the outside.

Ureteric stents can be placed either antegrade (through the nephrostomy) or retrograde (through the bladder), but in your case the decision has been made to place it antegrade.

Who has made the decision?

The consultant in charge of your care and the interventional radiologist have discussed your case and feel that this is the best option. However, you will also have the opportunity for your opinion to be considered and if, after discussion with your doctors, you no longer want the procedure, you can decide against it.

Are there any risks?

Antegrade ureteric stenting is a very safe procedure, but as with any medical procedure there are some risks and complications that can arise.

The main risk is failure to place the stent. This is more common if the ureter is completely blocked. If this happens, a nephrostomy will be reinserted, and your options can be discussed with your doctors. Antegrade stenting may be successful on a second visit but occasionally surgery is necessary to place the stent.

There may also be bleeding from the kidney and on very rare occasions, this may require another radiological procedure or surgery to stop it. It is not uncommon for the urine to be bloody immediately after the procedure. This usually clears over the next 24 to 48 hours.

Sometimes in attempting to pass the blockage, the ureter or bladder may be damaged. If this happens the stent can sometimes still be placed. If not, a nephrostomy will be reinserted. Sometimes additional surgery or monitoring may be required before the procedure can be reattempted.

There is a small risk of developing a urinary tract infection which can usually be treated with antibiotics. An infection can lead to an infection in the blood (sepsis) which can make you unwell.

During the procedure you will receive a dose of radiation as a result of the X-rays used. There is a possible risk of cancer induction from exposure to X-rays. However, we are constantly exposed to radiation from the air we breathe, the food we eat, the ground and from space. This is known as background radiation and has a cancer risk of around 1 in 10,000 per year. Having the procedure could result in you receiving an additional dose of radiation equivalent to a few years of background radiation. The associated risk of possible cancer induction from receiving a dose of radiation equivalent to a few years of background radiation is considered to be low. Your doctor has agreed that this procedure is the best examination for you compared with others and that the benefit of having it outweighs the risks from radiation.

Are you required to make any special preparations?

Antegrade ureteric stenting is usually carried out as a day case procedure or you may require an overnight bed. You will be asked to attend the ward early in the morning so all required paperwork can be completed. You will also be asked not to eat for four hours before the procedure, although you may take small sips of water up to an hour prior to the procedure. You may receive an antibiotic prior to the procedure.

You may be sent a blood form and asked to arrange a blood test prior to the procedure to check your bloods are within safe limits to have the procedure.

If you are taking anti coagulation or anti platelet medication, such as warfarin, you will be given instructions detailing if this medication needs to be stopped and for how long. If you have not been given this information, please contact the Interventional Radiology department. Unless advised otherwise please continue to take all other medication e.g. for blood pressure.

If you have previously had a reaction to the dye (contrast agent) or a local anaesthesia please contact the Interventional Radiology department.

You should have someone to drive you home following the procedure. Someone should be at home with you for 24 hours following the procedure. If you do not, please let the Interventional Radiology department know.

Who will you see?

A specially trained team led by an interventional radiologist who has special expertise in reading the images and using imaging to guide catheters and wires to aid diagnosis and treatment.

Where will the procedure take place?

In the Interventional suite, which is located within the X-ray department and is similar to an operating theatre.

What happens during the procedure?

Before the procedure, a member of the interventional team will explain the procedure and ask you to sign a consent form. Please feel free to ask any questions that you may have and remember that even at this stage, you can decide against going ahead with the procedure if you so wish.

On the ward you will be asked to get undressed and put on a hospital gown. A small cannula (thin tube) may be placed into a vein in your arm in case you need any medication.

You will lie on the X-ray table, generally flat, or nearly flat on your stomach. The X-ray machine will be positioned above you. You may have monitoring devices attached to your arm, chest and finger.

Antegrade ureteric stenting is performed under sterile conditions and the interventional team members performing your procedure will wear sterile gowns and gloves.

You will have already had a nephrostomy performed. Your nephrostomy and skin will be cleaned with a cold antiseptic and you will be covered with sterile drapes. Usually, local anaesthesia is not required as no new incision is needed. The nephrostomy tube will be removed over a guide wire to allow the introduction of a special plastic tube (catheter). Dye (contrast agent) will be injected into the catheter to identify the blockage. A new guide wire will be used to cross the blockage into the bladder. Once the wire has been placed through the blockage and into the bladder, the long plastic stent can be placed over the guide wire. Urine should now be able to pass down the stent and into the bladder. Depending on the final images the nephrostomy may be removed, or a new nephrostomy drainage tube may be left in the kidney and clamped (not draining). This will be removed at a later date if everything is working normally; an appointment for this will be arranged.

Will it hurt?

During the procedure, you may be aware of some pushing as the ureteric stent is delivered to the correct position. Occasionally you may feel some discomfort when the wire enters the bladder. Although this is uncomfortable for a short while, it means that the procedure has been successful.

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 an hour.

What happens afterwards?

You will be taken back to your ward. Nursing staff will carry out routine observations. You will generally be required to stay in bed, initially lying flat. If you have an issue lying flat, please contact the Interventional Radiology department. After which you will be allowed to sit up, then to walk around the ward, until you have recovered and are ready to go home, usually 4 to 6 hours post procedure. You will be informed following the procedure when dressings should be removed and when normal daily activities should recommence.

Your stent will need to be changed regularly to avoid potential complications such as infections. This can be done retrograde (through the bladder); there is no requirement for a further nephrostomy. Appointments for stent changes will be arranged by your doctor (usually a urologist).

If you have any concerns after discharge; for non-urgent issues please contact your GP or 111, for urgent issues please come to A&E.

Finally, some of your questions should have been answered by this patient information 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.

Interventional Radiology

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