

## **Information for Patients having a Ureteric Stent**

### **What is antegrade ureteric stenting?**

The ureter is the tube inside the body which connects the kidney to the bladder. This allows urine to be removed from the body when you go to the toilet. When the ureter becomes blocked for example by a stone or pressure from within the body then the kidney fills up with urine causing a lot of pressure. This pressure needs to be released. An operation may be needed to release this pressure or an antegrade ureteric stenting may be performed.

Antegrade ureteric stenting is performed using local anaesthetic. A small wire is passed through the skin into the kidney down the ureter and into the bladder. A small plastic tube called a stent is passed along the wire so that one end is in the kidney and the other is in the bladder. This will then act as a passageway for the urine to drain in the normal way into the bladder.

### **Why do I need antegrade ureteric stenting?**

Tests will have shown that you have a blockage of the ureter. The cause at this time may not be known.

### **Who has made the decision?**

The consultant looking after you will have discussed your case with a specialist called a radiologist and they will have decided that this is the best option for you.

You will have time to discuss this with both your doctor and the radiologist performing the procedure. You may decide that you do not wish to go ahead with the procedure after talking to the doctor or radiologist.

### **Who will be doing the antegrade ureteric stenting?**

The radiologist is specially trained to perform this type of procedure. It involves the use of special x-ray equipment which the radiologist has expertise in the use and understanding of the images produced.

### **Where will the procedure take place?**

This procedure will usually be carried out in the x-ray department in one of the special operating rooms designed for such a purpose. It may also be performed in an operating room in theatre using a special mobile x-ray machine.

### **How do I prepare for antegrade ureteric stenting?**

You will need to be admitted to hospital. You will be asked not to eat anything for four hours before the procedure. You will be asked to change into a hospital theatre gown. You will have a small tube placed into the vein in the back of your hand or arm so that you can be given some antibiotics. You must tell the doctor if you have any allergies.

### **What actually happens during antegrade ureteric stenting?**

You may already have a tube in place in your kidney called a nephrostomy. If you have then the first part of the procedure will already have been done and the guidewire will be passed through the tube that is already there.

You will be asked to lie on the x-ray table either flat on your stomach or with one side raised. Monitoring equipment will be placed on your chest, arm and finger. You will be given oxygen usually through small tubing placed by your nose.

You will be given sedation and painkillers through the venflon.

The Radiologist and the doctor or nurse assisting will wear a theatre gown and operating gloves to keep everything sterile. Your skin will be cleaned with special cleaning solution and the rest of your body will be covered with sterile drapes.

The radiologist will use ultrasound to decide the best area of approach and administer local anaesthetic into your skin at this point. A small cut will then be made to allow a fine needle to be passed into the kidney. When the needle is in a satisfactory position a fine wire is passed through it into the kidney. The needle is removed and the catheter is passed over the wire into the kidney. The wire is carefully moved down the ureter through the blockage. Once the wire has reached the bladder the stent can be passed over the wire and left in position. Sometimes another temporary tube (nephrostomy) is left for access to the kidney from the skin. The nephrostomy tube is secured to the skin with a small stitch. The end of the tube is closed with a special cap and a dressing put over the top or you may have drainage bag attached for urine to drain into.

### **How long will it take?**

The complexity of the procedure varies as every individual case is different. The procedure can take 30 minutes or it may on occasion take up to 90 minutes. On average you should expect to be in the x-ray department for about an hour.

What happens afterwards?

You will be taken back to your ward with instructions to rest for a few hours. The ward nurses will monitor your pulse and blood pressure and tube site/drainage bag to ensure you have no problems. The nephrostomy tube and stent will remain in your body for the time being. You will be able to carry on as normal. You will however need to ensure that you do not make any sudden movements and risk pulling the tube out. You may have to slightly adjust the way you sit or lie to be more comfortable. The bag will need to be emptied regularly to avoid becoming overfull.

### **How long will the nephrostomy and stent stay in and what happens next?**

How long the nephrostomy tube and stent stay in will depend on your individual circumstances. This will need to be discussed with your doctor. It may only need to be in for a short time for example to allow a stone to pass. It may need to be in for longer if you need a more permanent solution for your blockage. The removal of the catheter does not hurt.

### **Are there any risks or complications?**

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

Probably the main problem is not being able to place the tube satisfactorily into the kidney. Sometimes the wire or stent will not pass through the blockage. If this happens then a surgeon will arrange another way of dealing with the blockage. This may involve surgery.

Sometimes urine may leak from the kidney causing a small collection of fluid inside the abdomen. If this becomes a large amount it may need to be drained.

There may be slight bleeding from the kidney. Rarely this may be severe and require a surgical operation or another radiological procedure to stop it.

There may be infection in the kidney or the surrounding space. This can usually be treated very well with antibiotics.

### **What are the benefits?**

In spite of these possible risks the procedure is usually very safe and will result in good improvement in your condition. Very rarely an operation is necessary but if the ureteric antegrade stenting had not been tried first then this operation would have been needed anyway.

Ureteric antegrade stenting is considered to be a very safe procedure which can save the need for a larger operation. Although there are some slight risks involved these are usually minor and do not happen very often.