What is a FURS and Laser?

Flexible Ureterorenoscopy (FURS) is a preferred treatment for small stones within the kidney using a very thin flexible telescope that can be passed up from the female urethra or end of penis in a man, into the bladder and up the ureter (tube connecting the kidney to the bladder. FURS is offered in the following circumstances:

- Small stones present in the kidney
- Stones resistant to shock wave lithotripsy treatment
- It can also be used to diagnose other abnormalities within the kidney such as unexplained pain or bleeding

The laser is a very fine fibre that can be passed up through the scope to the kidney. Energy from an external power source can break up stones or act as a ‘spot welding’ tool for bleeding points, for example.

How is the procedure carried out?

FURS is carried out under a general anaesthetic. The first step is to examine the bladder with a telescope and to pass a guidewire and plastic tube up into the ureter (the pipe with connects the kidney to the bladder). X-ray contrast (dye) fluid is injected up the tube in your ureter. This outlines the kidney system on X-ray and acts as a ‘roadmap’ for the FURS procedure (see X-ray above). A small dilating sheath is passed over the guidewire into the ureter and the FURS telescope is then advanced up through the sheath into the kidney. The surgeon can manoeuvre the end of the FURS scope into all parts of the inner kidney using a hand control outside the body to flex the end of the scope as necessary.

When the stone is seen, using a video transmitted image to a computer screen, it can be shattered using the laser fibre and power source. Once fragmented, the pieces can be removed using a tiny wire basket, which is passed up through the FURS scope.

Before the Operation

The X-ray findings will be explained to you in the outpatient clinic and if suitable, you will be booked to come in for the FURS procedure. You will be asked to attend for a pre-assessment appointment where you will have blood tests, chest X-ray and ECG depending on your general health and any pre-existing medical conditions. Please bring any medications with you to this appointment and you will be told if any of them need to be stopped prior to surgery. Make sure you alert the staff if you take warfarin, aspirin, clopidogrel or any other blood-thinning medications.

You will be asked to come into Springfield Hospital on the morning of the proposed FURS procedure. You should be ‘Nil By Mouth’ for a certain time prior to admission. Please check when you can eat and drink before the operation as your procedure may be cancelled on the day if you have had anything to eat or drink at the wrong time.
The anaesthetist will see you in your room to go through any questions before surgery. You will be asked to sign a consent form, which explains the risks and benefits of the FURS procedure (see Consent section overleaf).

**Consent**

You will be asked to sign a consent form prior to surgery. The main complications that may occur are as follows:

- Urine infection post-procedure – rare as antibiotics are given to cover you during the operation
- Bleeding and pain in the kidney afterwards – this usually settles within 24-48hrs
- Damage to the ureter tube – below 1%
- Stone fragments remaining in kidney – below 5%
- Readmission for pain control/bleeding – below 1%

**After the operation**

Once your operation is over, you will be woken and taken to the recovery suite to be monitored by the staff there before being moved back to the ward. You may have a bladder catheter, which can be removed after a few hours. You will be able to eat and drink on the ward and if you feel pain or feel sick, let the staff know, as they will be able to give you appropriate medication. While in bed after the operation you should move your feet and wriggle your toes to help promote circulation in your legs. This will reduce the risk of blood clots forming.

You will be given regular, as well as stronger painkiller tablets as and when you need them. Don’t hesitate to ask for them, because if you are free from pain, you will be able to mobilize more quickly. Patients are usually booked for an overnight stay, however, if you feel well after the procedure, you may be discharged the same day.

Once discharged, some patients may require a few days off from work. Driving can recommence immediately as long as you are pain free. You should avoid heavy lifting or straining for the first few days. You may have some pink colour to the urine for a week, which is normal.

**Outpatient Follow Up**

You will be given an appointment to attend the outpatient clinic about 3-4 weeks after surgery. Any questions can be answered at this time. You may be booked in to have formal Metabolic Stone Analysis (MSA), so that advice can be given as to how to try and prevent further stones forming in the future.

If you are concerned about any aspect of your operation, please contact us using the details below or those on the front of this leaflet.

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