Ureteroscopy and Laser Stone Fragmentation (M0190)

What is Ureteroscopy?

Ureteroscopy is a procedure in which a small telescope is inserted through the urethra and bladder and into the ureter or kidney, it is used to diagnose and treat a stones (and a variety of other problems) in the urinary tract. A laser is then used to break up any stones found.

Rigid Ureteroscopy (RURS) is a treatment for stones in the ureter and Flexible ureterorenoscopy is a treatment for kidney stones.

Why this procedure

Ureteroscopy and fragmentation of stones using a laser device is generally more successful than with shock wave lithotripsy.

What is the procedure

Under a general anaesthetic, thin telescopes are inserted through your urethra (waterpipe) which gives access to the ureter and kidney. Once positively detected the stone can then be fragmented using a laser. The resultant fragments are then either washed out as dust or removed with a fine basket type device used to pick up any larger pieces.

The procedure often also involves the use of x-rays and the insertion of a soft plastic tube (stent) between the kidney and the bladder. This ensures drainage of urine from the kidney to ensure stone fragments can pass easily.
Before, during and after the procedure

The procedure is performed under general anaesthetic but the majority of patients are treated as a day case and you can go home the same day. As with any medical procedure under general anaesthetic there are risks and side effects, most patients however do not suffer any significant problems.

It is common to suffer mild burning or bleeding when you pass urine for a short period after the procedure. Having a stent can cause pain, a more frequent need to urinate and blood in the urine. The stent will also require a further procedure, usually under a local anaesthetic, 4 to 7 days later.

Occasionally it may not be possible to treat the stone(s) or the procedure could result in kidney damage or an infection. Rarely there could be damage, scarring or constriction of the ureter, which could require further treatment or a Percutaneous Nephrostomy (where a tube is inserted through the back into the kidney to drain it).

You should drink plenty of fluids to try and flush the stone fragments and clear the urine. If you develop a fever, severe pain, you cannot pass urine or your bleeding increases, you should seek medical advice immediately. Small blood clots or stone fragments can pass down from the kidney, resulting in kidney pain. This is a sign that the stone is attempting to pass but you seek medical attention if you have intolerable pain despite painkillers or if you also have a temperature.

How do I prevent further stones?

After your stone(s) have been treated, it may be possible to perform a diagnostic examination (M1110) to tell you the type of stones you from and then provide detailed and specific dietary advice to try and prevent recurrence. Unfortunately, once you have had stones you do have a high chance of recurrence (50% at 5 years). Your urologist will look at any specific factors in your blood and urine that may need correction to help prevent future stone formation. This may require modifying dietary factors and increasing the volume of fluid drunk per day. Most stone formers should aim to produce 2-2.5 litres of urine per day - this may require a significant increase to your fluid intake. Your urologist will help you with tips to achieve this.