**Introduction:**

Ureteroscopy is a common procedure whereby a tiny camera (ureteroscope) is inserted through the urethra and into the ureter or kidney. This may be performed to treat kidney stones or to investigate abnormalities in the ureter or kidney.

During laser lithotripsy, a stone in the kidney or ureter is fragmented to small pieces using a tiny laser through a ureteroscope.

The procedure typically takes less than an hour and patients are discharged on the same day. A ureteric stent is left in the ureter. This is a long thin tube extending from the kidney to the bladder and is left in place to encourage stone fragments to pass and to prevent pain which could otherwise result from swelling of the ureter and blockage of the kidney. The stent may be left with a tether; patients will notice a small thread coming out the urethra and taped to their leg or penis. They will be instructed to pull the thread to remove the stent several days following surgery. Typically, patients describe this as a strange sensation, but not painful.

In some cases, such as large or impacted stones, a stent will need to stay in for a few weeks rather than a few days. In these cases, there will be no thread attached to the stent, and the stent will need to be removed cystoscopically; you will come for a short procedure in the hospital during which a small camera will be inserted into your bladder in order to remove the stent. This procedure is done while awake using local anesthetic and typically takes only a few minutes.

**Side effects and potential risks:**

Patients may have blood in the urine while the stent is in place. You should try to stay well-hydrated to prevent blood clots. The stent may cause bladder irritation causing you to urinate more frequently. You may have some mild burning with urination. The stent will allow urine to travel backwards to the kidney while urinating; this can result in some flank discomfort. While most patients experience minimal discomfort after surgery, a small proportion of people experience significant pain and irritation from the stent.

Some patients have temporary flank pain within an hour of stent removal. This can result from spasm of the ureter causing pain which is similar to the pain felt from kidney stones, and typically resolves within an hour. Taking an over-the-counter anti-inflammatory such as ibuprofen or acetaminophen 20 minutes before stent removal may help prevent this pain.

Occasionally, when a stone is associated with a lot of ureter swelling/inflammation, it can be impossible to visualize the stone with the ureteroscope in which case the procedure would fail and we would discuss alternative options.

When stones are treated in the kidney, rather than the ureter, it is common to have residual stone fragments in the kidney which can be monitored postoperatively. During laser lithotripsy, the stone is fragmented into tiny fragments and dust. These tiny particles may settle together in the kidney and can be mistaken on ultrasound for a single larger stone.

Very rare complications include infection and injury to the ureter. Scar tissue can form in the ureter as a result of kidney stones themselves or of their treatment.

**Discharge instructions:**

You should avoid heavy lifting and strenuous exercise until after the stent is removed. Try to stay well hydrated to prevent blood clots in the urine. You will be given a prescription painkiller to take if necessary although many people do not require it. You will be told when to remove your stent, either by pulling the thread yourself or coming to the hospital for cystoscopic stent removal. It is a good idea to take an over-the-counter painkiller 20 minutes before your stent is removed.

Patients can typically return to work after a couple of days. There are no restrictions with respect to showering/bathing.

If you were instructed to hold blood thinners for the procedure, you can resume these once your urine has been clear for 2 consecutive days.

**Questions?:**

It is important that you are fully informed and have had all your questions answered prior to the procedure. If you have any questions or concerns at any time either before or after the procedure, please discuss with us.