



Information and consent form for Stone manipulation

Surname: _____

Forename: _____

Date of Birth: _____

What are kidney stones?

Urine contains many dissolved minerals and salts. When your urine has high levels of these minerals and salts, stones can form. Some stones stay in the kidney, and don't cause problems. Others can travel down the ureter (the tube between the kidney and the bladder). If the stone reaches the bladder, it can be passed out through the urine. If the stone becomes lodged (stuck) in the ureter, it blocks the urine flow. This causes great pain.

What are the symptoms of kidney stones?

Stones in the kidney often do not cause any symptoms and can go undiagnosed. When a stone leaves the kidney, it can travel to the bladder and may get stuck in the ureter. When the stone blocks the flow of urine, it can cause the kidney to swell (hydronephrosis), this is often very painful.

Common symptoms of kidney stones are:

- A sharp, cramping pain in the back and side. The pain often moves to the lower abdomen or groin. The pain can start quickly and come in waves. It can come and go as the body tries to get rid of the stone.
- A feeling of intense need to urinate.
- Going to the bathroom more often or having a burning feeling when you go.
- Urine that is dark or red due to blood.
- Nausea and vomiting.
- Men may feel pain at the tip of their penis.

Surgical treatment of kidney stones

Your urologist may recommend surgery for a stone when:

- The stone is too big and chances for spontaneous passage is too small.
- The stone fails to pass spontaneously after conservative management.
- The pain is too great to wait for the stone to pass.
- The stone is affecting kidney function. (e.g. A stone in a single kidney or bilateral stones).
- There is infection associated with the obstructing stone.

Small stones in the kidney may be left alone with no pain or infection. Some people choose to have their small stones removed. They do this because they are afraid the stone will start to pass and cause pain.

How is the operation done?

The operation usually takes less than one hour to perform and is normally done under general anaesthesia.

A special telescope called a cystoscope is inserted that passes up the urethra until it reaches the bladder.

The urethra is the tube that carries the urine from the bladder out through the penis.

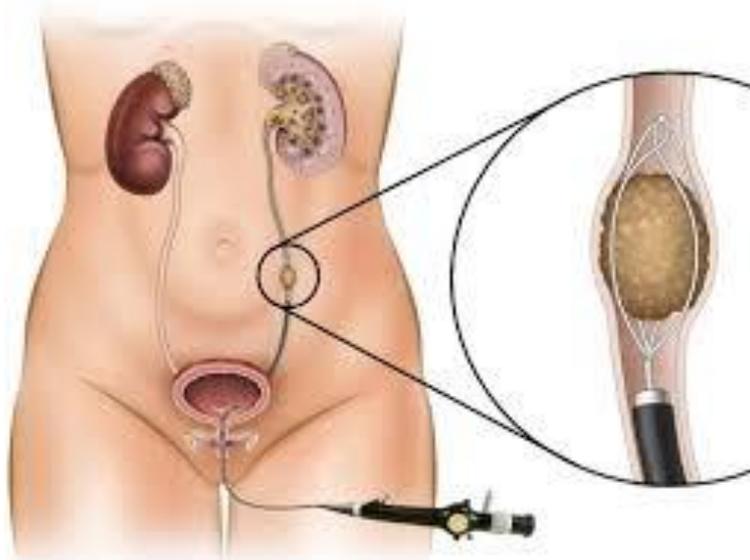
A special wire is placed through the cystoscope into the ureter all the way up into the kidney (bypassing the kidney stone). A ureteroscope is then passed over the guidewire all the way to the level of the kidney stone.

Ureteroscopy (URS) is used to treat stones in the kidney and ureter. URS involves passing a small telescope, called an ureteroscope, into bladder then, up the ureter and into the kidney. Rigid ureteroscopes are used for stones in the ureter and flexible ureteroscopes are used to treat stones in the upper ureter and kidney. The ureteroscope lets the urologist see the stone without making an incision (cut). Once the urologist sees the stone with the ureteroscope, a small, basket-like device grabs smaller stones and removes them. If a stone is too large to remove in one piece, it can be broken into smaller pieces with a laser or other stone-breaking tools.

Once the stone has been removed in whole or in pieces, your urologist may place a temporary stent in the ureter. A stent is a tiny, rigid plastic tube that helps hold the ureter open so that urine can drain from the kidney into the bladder. The stent is completely within the body. It does not require an external bag to collect urine.

You may go home the same day as the URS and can begin normal activities in 2 to 3 days.

If your urologist places a stent, he or she will remove it 7 to 14 days later. Sometimes a string is left on the end of the stent so you can remove it on your own. **It is important that the stent is removed when your urologist tells you.** Leaving the stent in for long periods can cause an infection and loss of kidney function.



What to expect when I come out of theatre?

Immediate post-operative period: After the surgery you will be taken to the ward. If there was significant bleeding during the operation your urologist might place a urinary catheter. This will be removed before discharge as soon as the urine is clear enough.

If you do not have a catheter, you may be discharged once your pain is controlled and you are able to urinate spontaneously. Expect blood in the urine with almost every urination. With time and hydration, the urine should slowly become clearer. It may however become bloody again even after it has initially cleared. The stent may cause pain or bladder spasms. Due to instrumentation, most patients will receive 3-5 days of oral antibiotics to prevent a urinary tract infection.

Postoperative Pain: Most patients after ureteroscopy experience mild to moderate pain in the flank and/or bladder area. This is generally well controlled by use of oral pain medication.

Ureteral Stent: Almost always after ureteroscopy, a small tube called a ureteral stent will be placed. The stent serves to facilitate drainage of urine down to the bladder. After 10 – 14 das, the stent will be removed by your urologist. You may experience bladder spasms related to the ureteral stent as well as pain and discomfort.

Nausea: Nausea is common following any surgery especially related to general anaesthesia. This is usually transient and is self-limiting. Should you have excessive nausea and vomiting, you should contact your surgeon for advice.

What the possible complications of this procedure?

As with any major surgery, complications, although rare, may occur with ureteroscopy. Potential risks and complications with this operation include but are not limited to the following:

- **Stent pain:**
About 50% of patients who undergo ureteroscopy and have a stent will have “stent pain,” and this is by far the most common risk/complaint following ureteroscopy. A stent is a soft plastic tube that allows the kidney to drain to the bladder regardless of oedema or obstruction. Not only can the stent irritate the inside of the bladder, causing a feeling of needing to urinate, but also the stent allows urine to pass up from the bladder to the kidney during urination – causing symptoms from a warm, tingling sensation to intense pain in the affected flank.
- **Stone fragments:**
Residual stones within the kidney or ureter may be present up to 40% of the time following ureteroscopy, depending on the original stone size and location. These stone fragments will be seen and addressed on follow-up imaging. Your urologist will discuss the success rate according to your stone size and location.
- **Ureteral injury:**
Injury to the ureter is the most common intra-operative complication during ureteroscopy. The reported risk of perforation ranges greatly, depending on whether

it is defined as a complete perforation (0.1-0.7% — think of this as a hole through the entire ureter), a partial perforation (1.6% — a hole nearly through the entire ureter), or mucosal tear/scrape (5%). Almost 100% of these will heal with prolonged stenting (anywhere between 2 – 4 weeks). Should a large perforation occur, your urologist may choose to stop the procedure and return on another day when the ureter has had time to heal. Should your urologist not be able to place a stent after a perforation, a tube called a “nephrostomy tube” will be placed through the skin of your back into the kidney. This tube temporarily diverts the urine away from the hole and out into a bag until healing can occur and the hole close. This complication and subsequent action are however rare.

- **Ureteral stricture and avulsion:**

Ureteral strictures (scar tissue within the ureter) and ureteral avulsion (complete dissociation of the ureter from the kidney) are the most feared complication of ureteroscopy. Fortunately, due to the advent of small ureteroscopes and heightened surgeon awareness, the risk of avulsion (0.05%, 1/2000) or stricture (0.2%, 1/500) is rare.

- **Haematuria and infection:**

Bleeding and infection are certainly possible following ureteroscopy (5%), but most of these are self-limiting and resolve with hydration and antibiotics, respectively.

What should I know before and after the procedure?

Before the procedure.

- Stop medication that is thinning the blood, such as aspirin, Plavix, Warfarin.
- Ask a doctor which drugs you should take on the day of the surgery.
- Do not eat or drink anything 8 hours prior to your surgery.
- You will be told when to arrive at the hospital.

After the procedure in hospital.

- In most cases you will be discharged the same day of your surgery. Only in a small number of cases will you be required to stay overnight.

After the procedure at home and follow-up visits.

- **Showering**

Patients can shower immediately upon discharge from the hospital

- **Activity**

Patients may begin driving once they are off all narcotic pain medication. Most patients can perform normal, daily activities within 2-3 days after a ureteroscopy. However, many patients describe more fatigue and discomfort with a ureteral stent in the bladder. This may limit the amount of activities that you can perform.

- **Diet:**

Most patients only desire clear liquids for the first 24 hours following ureteroscopy, as your intestinal function may be sluggish because of surgery and general anaesthesia. Following this period, patients may resume a regular diet as tolerated.

- **Fatigue:**

Fatigue is quite common following surgery and should subside in a couple days following surgery.

Follow-up Appointment:

Patients should make a follow-up appointment with their surgeon for removal of a JJ stent if one was placed or for routine post-surgical follow up and possible metabolic stone analysis if no stent was placed.

Declaration by Doctor

- I declare that I have explained the nature and consequences of the operation to be performed and discussed the risks that particularly concern the patient.
- I have given the patient an opportunity to ask questions and I have answered these.

Doctor's signature: _____

Doctor's name: _____

Date: _____

Declaration by patient

- I acknowledge the surgeon has informed me about the procedure, alternative treatments and answered my specific queries and concerns about this matter.

Signature of patient: _____ Date: _____

Interpreter's declaration - where needed

I confirm I have accurately interpreted the contents of this form and the related conversations between the patient and the doctor.

Interpreter's signature: _____ Date: _____