

Ureteroscopic Stone Extraction

What does the procedure involve?

Telescopic removal/ fragmentation of stone(s) in the ureter (fine tube between the bladder and the kidney) or kidney with possible placement of a soft plastic tube or stent between the kidney and the bladder. This procedure also includes cystoscopy (telescopic view of the bladder) and x-ray screening

What are the alternatives to this procedure?

Open surgery, shock wave therapy or observation to allow spontaneous passage

What should I expect before the procedure?

You will usually be admitted on the same day as your surgery or you may have the surgery as part of an emergency admission. You will need a repeat plain xray on the day of surgery or day before to see if the stone has moved. After admission, you will be seen by members of the medical team, which may include the anaesthetist, myself and a member of the nursing staff. You will be asked not to eat or drink for 6 hours before surgery and, immediately before the operation, you may be given a pre-medication by the anaesthetist which will make you dry-mouthed and pleasantly sleepy.

Please be sure to inform me in advance of your surgery if you have any of the following: an artificial heart valve , a coronary artery stent , a heart pacemaker or defibrillator, an artificial joint, an artificial blood vessel graft, a neurosurgical shunt, any other implanted foreign body, a prescription for Warfarin, Aspirin or Clopidogrel (Plavix®)

What happens during the procedure?

Normally, a full general anaesthetic will be used and you will be asleep throughout the procedure. You will usually be given injectable antibiotics before the procedure, after checking for any allergies.

A telescope is inserted into the bladder through the water pipe (urethra). Under X-ray screening, a flexible guidewire is inserted into the affected ureter up to the kidney. A longer telescope (either rigid or flexible) is then inserted into the ureter and passed up to the kidney. The stone is disintegrated using a mechanical probe or laser and the fragments extracted with special retrieval basket or if they are very small they are left to pass spontaneously.



A ureteric stent may be left in place if the work done to break up the stone, or the presence of the stone itself, has caused trauma and swelling of the ureteric wall. Stents are in themselves uncomfortable for some patients but if not left, the swelling may feel like the return of colic or pain associated with the presence of the stone originally. Rarely a bladder catheter will be left in. Sometimes it is an option to leave a catheter in the bladder with a second finer catheter in the ureter for the night to avoid the need for a stent.

What happens immediately after the procedure?

If a bladder catheter has been inserted, this is usually removed on the day after surgery. You will be able to go home once you are passing urine normally. Most patients go home on the same day as their operation.

Are there any side-effects?

Most procedures have a potential for side-effects. You should be reassured that, although all these complications are well-recognised, the majority of patients do not suffer any problems after this procedure.

Common (greater than 1 in 10)

- Mild burning or bleeding on passing urine for short period after operation
- Temporary insertion of a bladder catheter
- Insertion of a stent with a further procedure to remove it . *The stent may cause pain, frequency and bleeding in the urine.* This is the commonest issue with the procedure.

Occasional (between 1 in 10 and 1 in 50)

- Inability to retrieve the stone or movement of the stone back into kidney where it is not retrievable, sometimes the ureter is narrow and a stent needs to be placed temporarily and you will need a further procedure in two weeks time.
- Kidney damage or infection needing further treatment
- Recurrence of stones

Rare (less than 1 in 50)

Damage to the ureter with need for open operation or tube placed into kidney directly from back to allow any leak to heal and very rarely, scarring or stricture of the ureter requiring further procedures



There are also general risks applicable to any type of surgery such as anaesthetic risks, bleeding requiring blood transfusion (very rare), deep venous thrombosis (clots in the legs) that may carry to the lungs (pulmonary embolism), hospital acquired infections.

What should I expect when I get home?

When you get home, you should drink twice as much fluid as you would normally to flush your system through and minimise any bleeding.

You may experience pain in the kidney over the first 24-72 hours, due to the swelling caused by insertion of the instrument or by the presence of a stent. Anti-inflammatory painkillers will help this pain that normally settles after 72 hours.

It will take at least 10 days to recover fully from the operation. You may return to work earlier than this depending on your job, please discuss this with me. You should not drive until you are comfortable you can do so without pain and not within the first 24 hours of an anaesthetic.

What else should I look out for?

If you develop a fever, severe pain on passing urine, inability to pass urine, recurrence of your colic pain that is severe or worsening bleeding, you should contact me on the call service 9387 1000.

Are there any other important points?

If a stent has been inserted, you will be informed before your discharge when the stent needs to be removed. Ureteric stents are usually removed in the Day Surgery Unit under local anaesthetic. STENTS MUST NEVER BE LEFT IN FOR PROLONGED PERIODS AS THEY ENCRUST WITH STONE MAKING THEIR REMOVAL VERY DIFFICULT.

You can prevent further stone recurrence by implementing changes to your diet and fluid intake. You will be provided with an information sheet regarding this.

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