

URETEROSCOPY, LASERTRIPY AND JJ STENT INSERTION

Introduction

Kidney stones are a common condition that afflict 1 in 10 Australian men and 1 in 35 Australian women in their lifetime. The treatment of kidney stones depends on the size, location and number of stones, and what symptoms they are causing. Ureteroscopy and lasertripsy is the most common method of removing stones from the kidney or ureter in Western Australia and has a high success rate.

What does the procedure involve?

Under general anaesthesia, a telescope is passed into the bladder and dye injected into the ureter (tube that joins the kidney to the bladder) to outline the upper urinary tract and create a “roadmap” for the surgeon. A long thin flexible telescope or ureteroscope is passed up the ureter into the kidney. A laser fibre is passed through the ureteroscope and laser energy is used to break the stones up into tiny fragments <2mm which can then be flushed out by the body. Some fragments may be removed using a small basket and sent for biochemical analysis. After a final check to ensure the stones have been completely fragmented, a JJ stent (plastic tube with curls on either end) may be placed to ensure that urine is able to drain freely through the ureter. The JJ stent bypasses any swelling or clots that can cause blockage and allows the ureter to widen in case further procedures are required. JJ stents can be removed in two ways, either by leaving a string on the end so it can be pulled out easily or using a telescope for removal in hospital as a day procedure under local anaesthetic.

Ureteroscopy video (1:26 mins) <https://www.youtube.com/watch?v=ayCH5cc0y1M>

What are the alternatives?

Extracorporeal shock wave lithotripsy (ESWL)
Percutaneous nephrolithotomy (PCNL)
Medical therapy (allowing a small stone pass naturally with drugs)
Dissolution therapy (uric acid stones can be dissolved with drugs)
Observation (stones that are not causing symptoms can be watched)

What are the risks of surgery?

Common (>10%)

Frequency, urgency and burning
Blood in the urine (especially with stent)

Occasional (1-5%)

Infection
Incomplete stone clearance (requiring further surgery)
Ureteric damage, stricture or scarring

Rare (<1%)

Anaesthetic or cardiorespiratory problems - intensive care

Chest infection, clots in the legs and lung, stroke, heart attack, death

What should I do before surgery?

- Test the urine 2 weeks prior to the procedure to ensure there is no infection
- Do not eat, drink, or chew gum for 6 hours before surgery
- If you are on blood thinning medication, discuss this with Dr Ooi

What should I expect after surgery?

Most patients stay overnight, however if you wish to go home the same day, please ask someone to stay with you for the first 24 hours.

Discharge information

Drink 2L of fluid each day and have a normal diet. Use Ural sachets every 4 hours to relieve any stinging or burning when passing urine. Restart blood-thinning medications after discharge if there are no bleeding issues.

If you have a JJ stent, you will see small amounts of blood in the urine intermittently and experience pelvic or back discomfort during physical activities or when passing urine (pressure transmitted to the kidney through the JJ stent). These symptoms will resolve completely once the stent is removed. If simple pain killers are not enough, ask Dr Ooi for other medications to relieve the symptoms.

Please contact Dr Ooi's rooms, the hospital, ward or nurse manager if you have any concerns, such as excessive pain, bleeding, difficulty emptying your bladder, fever or feel unwell. General advice is also available on our website in the Procedures section.

Appointments

Dr Ooi will see you to remove the JJ stent 5-7 days after. If you live remotely and things are going well, you may prefer to remove the stent yourself and have a telephone call for follow-up instead. Please ensure you have some strong pain killers available as it is common to have pain in the first 24 hours after stent removal. If there are residual fragments, Dr Ooi will schedule a second operation to clear all the stones and remove the stent.

How can I prevent getting more stones in the future?

https://www.health.qld.gov.au/_data/assets/pdf_file/0033/429729/diet-kidney-stones.pdf