
Percutaneous Stone Removal

Disintegration & extraction of kidney stones with a telescope placed into the kidney by keyhole surgery

This patient information leaflet is drawn from the consensus panels of many worldwide urological societies, as a supplement to any advice that you may already have been given. Alternative treatments are outlined below and can be discussed in more detail with Dr Campbell.

What are the alternatives to this procedure?

External shock wave treatment, Telescopic laser surgery, Open surgical removal of stones, observation.

Before the procedure

Please be sure to inform Dr Campbell in advance of your procedure if you have any of the following:

- ~ An artificial heart valve
- ~ A coronary artery stent
- ~ A heart pacemaker or defibrillator
- ~ An artificial blood vessel graft
- ~ A neurosurgical shunt
- ~ Any other implanted foreign body
- ~ Blood thinning medications, particularly
 - ~ Asasantin
 - ~ Aspirin
 - ~ Fish oil
 - ~ Iscover
 - ~ Persantin
 - ~ Plavix
 - ~ Warfarin
- ~ Haematological abnormalities
- ~ Enlarged spleen or liver
- ~ Angina
- ~ Hypertension
- ~ Diabetes
- ~ Recent heart attack

You will usually be admitted on the day of surgery. You may be asked to attend a pre-admission clinic 5-10 days before the procedure to assess your general fitness and to perform some baseline investigations. An X-ray may be taken in advance of surgery to confirm the position of your stone(s).

If you are taking warfarin, Clopidogrel, iscover, asaantin, or persantin on a regular basis, you must discuss this with Dr Campbell because these drugs can cause increased bleeding after surgery. There may be a balance of risk where stopping them will reduce the chances of bleeding but this can result in increased clotting, which may also carry a risk to your health. This will, therefore, need careful discussion with regard to risks and benefits.

You will be asked not to eat or drink for 6 hours before surgery. Immediately before the operation, you may be given a pre-medication by the anaesthetist which will make you dry-mouthed and pleasantly sleepy.

You will be fitted with elasticated stockings on admission, which will help prevent thrombosis (clots) in the veins of the legs.

After admission, you will be seen by members of the urological team which may include not only Dr Campbell, but the specialist registrar, the intern, and your named nurse. The specialist registrar may perform the operation in conjunction with Dr Campbell and with your permission.

Where do I go for my procedure?

The admissions section of the hospital at the appointed time, on the appointed day. The admissions section of the particular hospital will give you instructions well in advance of the operation.

If no contact has been made telephone Dr Campbell's secretary on (07) 3367 1608, and the problem will be addressed.

Percutaneous Stone Removal continued...

Do I need to do anything special before my procedure?

You will need to not drink or eat anything for 6 hours prior to the procedure.

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.

The operation is usually carried out in a single stage. First, a small tube is inserted up the ureter into the kidney by means of a telescope passed into the bladder. You are then turned on to your face and a puncture track into the kidney is established, using X-ray guidance. Finally, a telescope is passed into the kidney and the stone(s) extracted or disintegrated with ultrasound. A catheter is usually left in the bladder at the end of the procedure together with a drainage tube in the kidney.

It may be necessary to puncture the kidney at more than one site if you have many stones scattered throughout the kidney.

The operation takes approximately 2–4 hours to complete depending on the number and size of the stone(s).

Immediately after the procedure

On the day after surgery, a further X-ray is normally performed to assess stone clearance. Occasionally, it may be necessary to perform an X-ray down the kidney drainage tube using contrast medium. If the X-ray is satisfactory, the tube in your kidney and the bladder catheter will be removed.

There is often some leakage from the kidney tube site for 24–48 hours and you will be only discharged once this leakage has resolved.

The average hospital stay is 3–4 days.

Are there any side-effects?

Most procedures have a potential for side-effects and these are outlined below. Please use the check circles to tick off individual items when you are happy that they have been discussed to your satisfaction:

Common (greater than 1 in 10)

- ~ Temporary insertion of a bladder catheter and ureteric stent/ kidney tube needing later removal
- ~ Transient blood in the urine
- ~ Transient raised temperature
- ~ Occasional (between 1 in 10 & 1 in 50)

Occasional (between 1 in 10 & 1 in 50)

- ~ No guarantee of removal of all stones & need for further operations
- ~ Recurrence of new stones
- ~ Failure to establish access to the kidney resulting in the need for further surgery

Rare (less than 1 in 50)

- ~ Severe kidney bleeding requiring transfusion, embolisation or at last resort surgical removal of kidney.
- ~ Damage to lung, bowel, spleen, liver requiring surgical intervention.
- ~ Kidney damage or infection needing further treatment
- ~ Over-absorption of irrigating fluids into blood system causing strain on heart function

General side-effects of any procedure

Any operative procedure that involves regional (spinal) or general anaesthetic can have side-effects. These are explained in the leaflet on anaesthesia.

Hospital-acquired infection

- ~ Colonisation with MRSA (0.9%, 1 in 110)
- ~ Clostridium difficile bowel infection (0.2%; 1 in 500)
- ~ MRSA bloodstream infection (0.08%; 1 in 1,250)

(These rates may be greater in high-risk patients e.g. with long-term drainage tubes, after removal of the bladder for cancer, after previous infections, after prolonged hospitalisation or after multiple admissions)

Percutaneous Stone Removal continued...

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 should aim to keep your urine permanently colourless to minimise the risk of further stone formation.

It may take at least 2 weeks to recover fully from the operation. You should not expect to return to work within 10 days, especially if your job is physically strenuous.

When you leave hospital, a discharge summary of your admission will be sent to your family doctor. This holds important information about your inpatient stay and your operation.

What else should I look out for?

If you develop a fever, severe pain on passing urine, inability to pass urine or worsening bleeding, you should contact Dr Campbell immediately. Small stone fragments may also pass down the ureter from the kidney, resulting in renal colic; in this event, you should contact Dr Campbell immediately.

For after hours emergencies Dr Campbell can be contacted on (07) 3367 1608.

The Wesley Hospital Emergency Centre (07) 3232 7333, and The Greenslopes Private Hospital Emergency Centre (07) 3394 7111 are other resources that are also available.

Are there any other specific points?

You can prevent further stone recurrence by implementing changes to your diet and fluid intake. If you have not already received a leaflet about this, contact Dr Campbell or download the leaflet.

Is there any research being carried out in this field?

There is no specific research in this area at the moment but all operative procedures performed are subject to rigorous audit at monthly Audit & Clinical Governance meetings.

Percutaneous Stone Removal continued...

Who can I contact for more help or information?

Dr Peter Campbell

Suite 9, level 9, Evan Thomson Building, The Wesley Hospital,
Chasely St,
Auchenflower, QLD 4066
(07) 3367 1608,
www.campbellurology.com.au

The Wesley Hospital, Urology Ward

451 Coronation Drive,
Auchenflower, QLD 4066
(07) 3232 7168
www.uhc.com.au/wesley

The Wesley Emergency Centre

451 coronation Drive,
Auchenflower, QLD 4066
(07) 3232 7333

Greenslopes Private Hospital, Continence Advisor

Newdgate St,
Greenslopes, QLD 4120
(07) 3394 7978
www.greenslopesprivate.com.au

Greenslopes Private Hospital Urology Ward

Newdgate St,
Greenslopes, QLD 4120
(07) 3394 7261
www.greenslopesprivate.com.au

Greenslopes Private Hospital Emergency Centre

Newdgate St,
Greenslopes, QLD 4120
(07) 3394 6777
www.greenslopesprivate.com.au

**The Queen Elizabeth II Jubilee Hospital,
Urodynamics Department**

Kessels Rd,
Coopers plains, QLD 4108
(07) 3275 6346

American Urological Association Foundation

1000 Corporate Blvd, Suite 410,
Linthicum, MD 21090
1800 828 7866
www.UrologyHealth.org

Thank you for taking the trouble to read this information sheet. If you are satisfied with the explanation of the test, please sign below and this leaflet will be filed in your chart.

If you wish to retain a copy for you own records, one will be provided.

I have read this information sheet and I accept the information it provides.

Signature

Date
