Laparoscopic removal of stone in the ureter or kidney: procedure-specific information

What is the evidence base for this information?
This leaflet includes advice from consensus panels, the British Association of Urological Surgeons, the Department of Health and evidence-based sources; it is, therefore, a reflection of best practice in the UK. It is intended to supplement any advice you may already have been given by your urologist or nurse specialist as well as the surgical team at Addenbrookes. Alternative treatments are outlined below and can be discussed in more detail with your Urologist or Specialist Nurse.

What does the procedure involve?
This involves the removal of stone(s) from the ureter or collecting system of the kidney with incision(s) into the kidney. It is performed through keyhole incisions and involves insertion of a temporary ureteric stent to aid healing with cystoscopy and x-ray screening.

What are the alternatives to this procedure?
Telescopic removal, open removal, external shock wave treatment, observation.

What is laparoscopic surgery?
Laparoscopy (otherwise known as “keyhole surgery”) is a form of minimal access surgery. This involves performing operations which are traditionally done by an “open” method but using “keyholes” instead. A number of urological procedures are now being performed by this method. It has been shown to be safe and effective for kidney surgery.
Your urologist will discuss the details of the procedure with you whilst you are an outpatient, outlining the procedure as part of your consent. You should be aware that there is a small chance that your procedure may need to be converted to an open procedure. For this reason, if you are insistent that you would not agree to an open operation under any circumstances, we would not be able to proceed with the laparoscopic operation.
What should I expect before the procedure?

You will usually be admitted on the same day as your surgery. If not done on the same day as your urology clinic appointment, you will normally undergo preassessment on the day of your clinic or an appointment for preassessment will be made from clinic, to assess your general fitness, to screen for the carriage of MRSA and to perform some baseline investigations. After admission, you will be seen by members of the medical team which may include the Consultant, junior Urology doctors and your named nurse. One important thing that you must do is to prepare yourself to mobilise immediately after the operation. You should try to walk at least 10 lengths of the ward before your operation.

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. You will need to wear anti-thrombosis stockings during your hospital stay; these help prevent blood clots forming in the veins of your legs during and after surgery.

Please be sure to inform your Urologist 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®)
- a previous or current MRSA infection
high risk of variant CJD (if you have received a corneal transplant, a neurosurgical dural transplant or previous injections of human-derived growth hormone)

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What happens during the procedure?
A full general anaesthetic will be used and you will be asleep throughout the procedure.

You will be transferred to the operating theatre on your bed and you will be taken first to the anaesthetic room. They may put a drip in to your arm to allow them to access your circulation during the operation. You will be anaesthetised and taken into the operating theatre. During the surgery you will be given antibiotics by injection; If you have any allergies, be sure to let the anaesthetist know.

An incision is made in the urete/renal pelvis or into the kidney depending on the position of the stone, to allow its removal. The incision is then closed by placing stitches. A ureteric stent is normally inserted to allow healing of the suture line in the ureter or pelvis of the kidney. A bladder catheter is also inserted during the operation to monitor urine output and a drainage tube is placed through the skin near the newly-formed anastomosis.
What happens immediately after the procedure?
   It is fine, and in fact you will be encouraged, to eat and drink as soon as you feel able to after surgery. You will be encouraged to mobilise as soon as possible after surgery. This helps to prevent blood clots forming in your legs, chest infection from developing, and also decreases any disturbance to your bowel function.  
   The catheter is normally removed the morning after surgery, and the wound drain the following day.  
   The expected hospital stay is 3 days. Some patients are able to go home earlier.

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 a urological procedure.

   Please use the check boxes to tick off individual items when you are happy that they have been discussed to your satisfaction:

Common (greater than 1 in 10)
   □ Temporary shoulder tip pain
   □ Temporary abdominal bloating

Occasional (between 1 in 10 and 1 in 50)
   □ Bleeding, infection, pain or hernia of the incision requiring further treatment
   □ Recurrence of stones can occur, requiring further surgery

Rare (less than 1 in 50)
   □ Bleeding requiring conversion to open surgery or requiring blood transfusion
   □ Recognised (or unrecognised) injury to organs/blood vessels requiring conversion to open surgery (or deferred open surgery)
   □ Involvement or injury to nearby local structures (blood vessels, spleen, liver, kidney, lung, pancreas, bowel) requiring more extensive surgery
   □ Need to remove the kidney at a later stage because of damage caused by recurrent obstruction/ stones/infection
   □ Anaesthetic or cardiovascular problems possibly requiring intensive care admission (including chest infection, pulmonary embolus, stroke, deep vein thrombosis, heart attack and death)
   □ Prolonged urine leak from the kidney requiring longer catheter time and/or drainage of the kidney by a small tube through the side.

Hospital-acquired infection (overall risk for Addenbrooke’s)
   □ Colonisation with MRSA (0.01%, 2 in 15,500)
   □ Clostridium difficile bowel infection (0.02%; 3 in 15,500)
   □ MRSA bloodstream infection (0.00%; 0 in 15,000)
(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)

What should I expect when I get home?
Before you leave hospital, the team will ensure you are safe to be discharged home. When you leave hospital, you will be given a discharge summary of your admission. This holds important information about your inpatient stay and your operation. If, in the first few weeks after your discharge, you need to call your GP for any reason or to attend another hospital, please take this summary with you to allow the doctors to see details of your treatment. This is particularly important if you need to consult another doctor within a few days of your discharge. There may be some discomfort from the small incisions in your abdomen but this can normally be controlled with simple painkillers. All the wounds are closed with absorbable stitches which do not require removal. It will take 10-14 days to recover fully from the procedure and most people can return to normal activities after 2-4 weeks.

What else should I look out for?
If you develop a temperature, increased redness, throbbing, drainage at the site of your operation, increasing abdominal pain or dizziness please contact your GP / Ward M4 (01223 348537)/ On-call Urology SpR (via hospital switch board 01223245151) immediately.

Are there any other important points?
The ureteric stent will normally be removed in the Day Surgery Unit under local anaesthetic after 4-6 weeks. To assess the effectiveness of the operation, we will perform further xray tests at your follow-up appointment.

Driving after surgery
It is your responsibility to ensure that you are fit to drive following your surgery. You do not normally need to notify the DVLA unless you have a medical condition that will last for longer than 3 months after your surgery and may affect your ability to drive. You should, however, check with your insurance company before returning to driving. Your doctors will be happy to provide you with advice on request.

Privacy & Dignity
Same sex bays and bathrooms are offered in all wards except critical care and theatre recovery areas where the use of high-tech equipment and/or specialist one to one care is required.
Hair removal before an operation
For most operations, you do not need to have the hair around the site of the operation removed. However, sometimes the healthcare team may need to remove hair to allow them to see or reach your skin. If the healthcare team consider it is important to remove the hair, they will do this by using an electric hair clipper, with a single-use disposable head, on the day of the surgery. Please do not shave the hair yourself, or use a razor for hair removal, as this can increase the risk of infection to the site of the operation. If you have any questions, please ask the healthcare team who will be happy to discuss this with you.
References:
NICE clinical guideline No 74: Surgical site infection (October 2008); Department of Health: High Impact Intervention No 4: Care bundle to preventing surgical site infection (August 2007)

Is there any research being carried out in this field at Addenbrooke’s Hospital?
All laparoscopic procedures are subject to continuous audit by the British Association of Urological Surgeons Section of Endourology. In addition, the National Institute of Health & Clinical Excellence (NICE) requires that we maintain a careful review of laparoscopic procedures.

Who can I contact for more help or information?
**Oncology Nurses**
- Uro-Oncology Nurse Specialist
  01223 586748
- Bladder cancer Nurse Practitioner (haematuria, chemotherapy & BCG)
  01223 274608
- Prostate cancer Nurse Practitioner
  01223 274608 or 216897 or bleep 154-548
- Surgical Care Practitioner
  01223 348590 or 256157 or bleep 154-351

**Non-Oncology Nurses**
- Urology Nurse Practitioner (incontinence, urodynamics, catheter patients)
  01223 274608 or 586748 or bleep 157-237
- Urology Nurse Practitioner (stoma care)
  01223 349800
- Urology Nurse Practitioner (stone disease)
  01223 349800 or bleep 152-879
**Patient Advice & Liaison Centre (PALS)**

- **Telephone**
  +44 (0)1223 216756 or 257257
  +44 (0)1223 274432 or 274431

- **PatientLine**
  *801 (from patient bedside telephones only)*

- **E mail**
  pals@addenbrookes.nhs.uk

- **Mail**
  PALS, Box No 53
  Addenbrooke's Hospital
  Hills Road, Cambridge, CB2 2QQ

**Chaplaincy and Multi-Faith Community**

- **Telephone**
  +44 (0)1223 217769

- **E mail**
  chaplaincy@addenbrookes.nhs.uk

- **Mail**
  The Chaplaincy, Box No 105
  Addenbrooke's Hospital
  Hills Road, Cambridge, CB2 2QQ

**MINICOM System ("type" system for the hard of hearing)**

- **Telephone**
  +44 (0)1223 217589

**Access Office (travel, parking & security information)**

- **Telephone**
  +44 (0)1223 596060

**What should I do with this form?**

Thank you for taking the trouble to read this information sheet. If you wish to sign it and retain a copy for your own records, please do so below.

If you would like a copy of this form to be filed in your hospital records for future reference, please let your Urologist or Specialist Nurse know. If you do, however, decide to proceed with the scheduled procedure, you will be asked to sign a separate consent form which will be filed in your hospital notes and you will, in addition, be provided with a copy of the form if you wish.

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

Signature.............................................Date...........................................
How can I get information in alternative formats?

Please ask if you require this information in other languages, large print or audio format: 01223 216032 or patient.information@addenbrookes.nhs.uk

Polish  
Informacje te można otrzymać w innych językach, w wersji dużym drukiem lub audio. Zamówienia prosimy składać pod numerem: 01223 216032 lub wysyłając e-mail: patient.information@addenbrookes.nhs.uk

Portuguese  
Se precisar desta informação num outro idioma, em impressão de letras grandes ou formato áudio por favor telefone para o 01223 216032 ou envie uma mensagem para: patient.information@addenbrookes.nhs.uk

Russian  
Если вам требуется эта информация на другом языке, крупным шрифтом или в аудиоформате, пожалуйста, обращайтесь по телефону 01223 216032 или на вебсайт patient.information@addenbrookes.nhs.uk

Cantonese  
若你需要此信息的其他语言版本、大字体版或音频格式，請致電 01223 216032 或發郵件到: patient.information@addenbrookes.nhs.uk

Turkish  
Bu bilgiyi diğer dillerde veya büyük baskı la ya da sesli formatta  isterseniz lütfen su numaradan kontak kurun: 01223 216032 veya aşağıdaki adrese e-posta gönderin: patient.information@addenbrookes.nhs.uk

Bengali  
এই তথ্য সংকলন, বড় অক্ষরে আর অক্ষর টিপে পাঠে চাইলে দেয়া করে 01223 216032 নংস্বার ফেন করলে বা পেইটেন্ট ইনফরমেশন@এডেনব্রুক্স এনএইচএস অর্ডার সেই ই-মেইল করলে।

Addenbrooke’s is a smoke-free site. You cannot smoke anywhere on the site. Smoking increases the severity of some urological diseases and increases the risk of post-operative complications. For advice on quitting, contact your GP or the NHS smoking helpline free on 0800 169 0 169

Document history

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