KEYHOLE RECONSTRUCTION OF THE KIDNEY PELVIS (LAPAROSCOPIC PYELOPLASTY)

Information about your procedure from
The British Association of Urological Surgeons (BAUS)

This leaflet contains evidence-based information about your proposed urological procedure. We have consulted specialist surgeons during its preparation, so that it represents best practice in UK urology. You should use it in addition to any advice already given to you.

To view the online version of this leaflet, type the text below into your web browser:
http://www.baus.org.uk/_userfiles/pages/files/Patients/Leaflets/Pyeloplasty lap.pdf

Key Points

- The aim of this operation is to repair a narrowed area where your kidney joins your ureter (the pelviureteric junction)
- The surgery is performed through keyhole incisions and the surgeon may use a surgical robot to assist the procedure
- After keyhole surgery, most patients will go home after one to two nights in hospital
- We usually put in an internal stent to help the repair heal; this is taken out after 4-6 weeks
- A radio-isotope scan after 12 weeks will be done to see how well your kidney function has recovered; in most patients, there is an improvement together with relief of the pre-operative pain
- In a small number of patients, the scan may show improvement but there is still some ongoing pain
- A small number of patients may need another operation if the narrowing comes back
- Occasionally, we need to remove the affected kidney later because of damage caused by recurrent obstruction

What does this procedure involve?

This involves repair of narrowing or scarring at the junction of the kidney pelvis with the ureter (the pelviureteric junction), performed through keyhole incisions. In some urology units, the surgeon will make use of an operative robot to perform the operation (but it is still done through

keyhole incisions). After the operation, we usually place a temporary plastic tube (stent) inside your ureter, between your kidney and bladder, in order to help healing. This stent will be removed a few weeks later under local anaesthetic.

What are the alternatives?

- **Observation** - this may be an option when symptoms are minor and not felt to justify surgery
- **Telescopic incision (endopyelotomy)** - cutting open the narrowed area with an electric wire passed up from the bladder or through the skin over the kidney
- **Stretching of the area of narrowing** - using a balloon passed up from the bladder or through the skin over the kidney, under X-ray screening
- **Temporary stenting** - by placing a small plastic tube (stent) through the narrowed area
- **Open surgery (pyeloplasty)** - reconstruction of the narrowed area through an incision in your loin

What happens on the day of the procedure?

Your urologist (or a member of their team) will briefly review your history and medications, and will discuss the surgery again with you to confirm your consent.

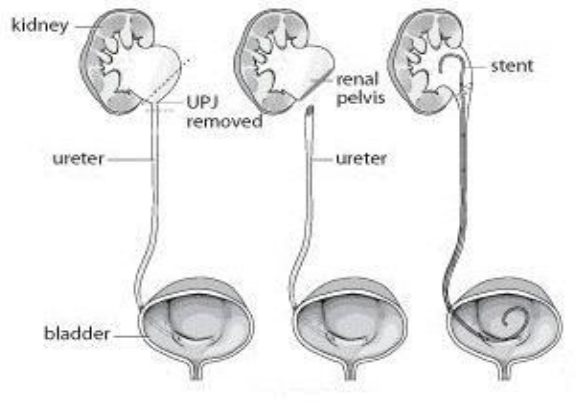
An anaesthetist will see you to discuss the options of a general anaesthetic or spinal anaesthetic. The anaesthetist will also discuss pain relief after the procedure with you.

We may provide you with a pair of TED stockings to wear, and we may give you a heparin injection to thin your blood. These help to prevent blood clots from developing and passing into your lungs. Your medical team will decide whether you need to continue these after you go home.

Details of the procedure

- we normally use a full general anaesthetic and you will be asleep throughout the procedure
- we usually give you an injection of antibiotics before the procedure, after you have been checked for any allergies
- we normally put a catheter into your bladder, during the operation, to measure urine output
- we inflate your abdominal cavity with carbon dioxide gas

- the operation is performed through several “keyhole” incisions (and may involve the use of a surgical robot)
- we divide or cut away the narrowing at the pelviureteric junction; we may need to fold down a flap of tissue from the kidney to widen the narrowing
- we normally put a stent in your ureter (pictured below) to speed up healing
- we may put a temporary catheter into your bladder to measure your urine output; your urologist can tell you whether this is likely to be needed
- we usually put a drain close to the kidney to collect any fluid which forms around the surgical site; the drain is normally removed the following day
- we close the keyhole incisions with absorbable sutures (which do not require removal) or tissue glue



- you will be given fluids to drink immediately after the operation and we will encourage you to move as soon as you are comfortable (to help prevent blood clots forming in your legs)
- your wound drain and catheter are normally removed after 24 to 48 hours
- the average hospital stay is between one and two days

Following pyeloplasty, some urology units have introduced Enhanced Recovery Pathways. These actually start before you are admitted to hospital. After your surgery, they are designed to speed your recovery, shorten your time in hospital and reduce your risk of re-admission.

We will encourage you to get up and about as soon as possible. This reduces the risk of blood clots in your legs and helps your bowel to start working again. You will sit out in a chair shortly after the procedure and be shown deep breathing/leg exercises. We will encourage you to start drinking and eating as soon as possible.

Are there any after-effects?

The possible after-effects and your risk of getting them are shown below. Some are self-limiting or reversible, but others are not. We have not listed

very rare after-effects (occurring in less than 1 in 250 patients) individually. The impact of these after-effects can vary a lot from patient to patient; you should ask your surgeon's advice about the risks and their impact on you as an individual:

After-effect	Risk
Shoulder tip pain due to irritation of your diaphragm by the carbon dioxide gas	 Almost all patients
Temporary abdominal bloating (gaseous distension)	 Almost all patients
A further procedure to remove the stent in your ureter, usually under local anaesthetic	 Almost all patients
Bleeding, infection, pain or hernia in one (or more) of the port sites, requiring further treatment	 Between 1 in 10 & 1 in 50 patients
Continuing pain, even when the post-operative scans show that your kidney drainage has improved	 Between 1 in 10 & 1 in 50 patients
Recurrent narrowing or scarring requiring further surgery	 Between 1 in 10 & 1 in 50 patients
Bleeding needing conversion to open surgery or requiring blood transfusion	 Between 1 in 50 & 1 in 250 patients
Recognised (or unrecognised) injury to nearby local structures (blood vessels, spleen, liver, kidney, lung, pancreas, bowel) requiring more extensive surgery	 Between 1 in 50 & 1 in 250 patients
Anaesthetic or cardiovascular problems possibly requiring intensive care (including chest infection, pulmonary embolus, stroke,	 Between 1 in 50 & 1 in 250 patients (your anaesthetist

deep vein thrombosis, heart attack and death)		can estimate your individual risk)
Need to remove the kidney at a later stage because of damage caused by recurrent blockage		Between 1 in 50 & 1 in 250 patients

What is my risk of a hospital-acquired infection?

Your risk of getting an infection in hospital is between 4 & 6%; this includes getting *MRSA* or a *Clostridium difficile* bowel infection. This figure is higher if you are in a "high-risk" group of patients such as patients who have had:

- long-term drainage tubes (e.g. catheters);
- bladder removal;
- long hospital stays; or
- multiple hospital admissions.

What can I expect when I get home?

- you will be given advice about your recovery at home
- you will be given a copy of your discharge summary and a copy will also be sent to your GP
- any antibiotics or other tablets you may need will be arranged & dispensed from the hospital pharmacy
- it will take 10 to 14 days to recover fully from the procedure and most people can return to normal activities after two to four weeks
- you may return to work when you are comfortable enough and when your GP is satisfied with your progress
- if you develop a temperature, increased redness, throbbing or drainage from any of the keyhole sites, you should contact your GP immediately
- your stent may cause pain in your kidney area, especially when you pass urine, or pain in your bladder; this usually settles quickly but, if you feel unwell or feverish, you should contact your GP to check for a urine infection
- you shoud be provided with information about "**living with a stent**"
- your stent will be removed 4-6 weeks after the procedure, usually under local anaesthetic
- we normally arrange a radio-isotope kidney scan around 12 weeks after surgery, to assess the drainage of your kidney

General information about surgical procedures

Before your procedure

Please tell a member of the medical team if you have:

- an implanted foreign body (stent, joint replacement, pacemaker, heart valve, blood vessel graft);
- a regular prescription for a blood thinning agent (e.g. warfarin, aspirin, clopidogrel, rivaroxaban, dabigatran);
- a present or previous MRSA infection; or
- a high risk of variant-CJD (e.g. if you have had a corneal transplant, a neurosurgical dural transplant or human growth hormone treatment).

Questions you may wish to ask

If you wish to learn more about what will happen, you can find a list of suggested questions called "Having An Operation" on the website of the Royal College of Surgeons of England. You may also wish to ask your surgeon for his/her personal results and experience with this procedure.

Before you go home

We will tell you how the procedure went and you should:

- make sure you understand what has been done;
- ask the surgeon if everything went as planned;
- let the staff know if you have any discomfort;
- ask what you can (and cannot) do at home;
- make sure you know what happens next; and
- ask when you can return to normal activities.

We will give you advice about what to look out for when you get home. Your surgeon or nurse will also give you details of who to contact, and how to contact them, in the event of problems.

Smoking and surgery

Ideally, we would prefer you to stop smoking before any procedure. Smoking can worsen some urological conditions and makes complications more likely after surgery. For advice on stopping, you can:

- contact your GP;
- access your local NHS Smoking Help Online; or
- ring the free NHS Smoking Helpline on **0300 123 1044**.

Driving after surgery

It is your responsibility to make sure you are fit to drive after any surgical procedure. You only need to contact the DVLA if your ability to drive is likely to be affected for more than three months. If it is, you should check with your insurance company before driving again.

What should I do with this information?

Thank you for taking the trouble to read this information. Please let your urologist (or specialist nurse) know if you would like to have a copy for your own records. If you wish, the medical or nursing staff can also arrange to file a copy in your hospital notes.

What sources have we used to prepare this leaflet?

This leaflet uses information from consensus panels and other evidence-based sources including:

- the Department of Health (England);
- the Cochrane Collaboration; and
- the National Institute for Health and Care Excellence (NICE).

It also follows style guidelines from:

- the Royal National Institute for Blind People (RNIB);
- the Information Standard;
- the Patient Information Forum; and
- the Plain English Campaign.

Disclaimer

We have made every effort to give accurate information but there may still be errors or omissions in this leaflet. BAUS cannot accept responsibility for any loss from action taken (or not taken) as a result of this information.

PLEASE NOTE

The staff at BAUS are not medically trained, and are unable to answer questions about the information provided in this leaflet. If you do have any questions, you should contact your urologist, specialist nurse or GP.