TELESCOPIC INSERTION OR REMOVAL OF A STENT FROM THE URETER

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/Ureteric stent insertion.pdf

Key Points

- Ureteric stents are normally used for obstruction (blockage) to one or both of your ureters (the tubes that carry urine from your kidneys to your bladder)
- They are put in through your bladder using a telescope passed along your urethra (waterpipe)
- Most stents are only needed for a short time but, in some patients, they stay for longer and need changing regularly
- Significant stent irritation is seen in six out of ten patients (60%) and may result in early removal of the stent
- Stent removal can usually be done under local anaesthetic using a small, flexible telescope

What does this procedure involve?

Ureteric stent procedures are normally carried out because of blockage to one or both of your ureters. The causes of the blockage may include:

- **a kidney stone (or stone fragment)** – this can move into your ureter, either by itself or after treatment such as extracorporeal shockwave lithotripsy
- **a stricture (narrowing) of the ureter** – this can occur anywhere in the ureter for a number of reasons (scarring, congenital narrowing etc.)
- **after surgery or instrumentation** – when an instrument has been put into the ureter and kidney (this is often only temporary)

- **after major surgery on the bladder or ureters** – ureteric stents are often used to encourage healing after removal of the bladder with urinary diversion, after other major procedures on the bladder or after injury to the ureter

The procedure involves telescopic examination of your bladder and urethra (waterpipe) combined with changing, removing or inserting a stent (soft plastic tube) between your kidney and bladder. We normally use X-ray control to be sure the stent is positioned correctly.

The stent (pictured right) is a specially-designed, hollow tube made of a flexible plastic material. It is designed to stay in the urinary system by having both ends coiled to stop it moving; the top end lies in your kidney with the lower end inside your bladder. Stents are flexible enough to withstand various body movements.

What are the alternatives?

- **Observation** – no treatment but careful follow-up of your kidney function
- **Percutaneous nephrostomy tube insertion** – puncturing your kidney through the skin of your loin, under local anaesthetic, to put a drainage tube into the kidney; it may be possible to put in a stent from above through this puncture

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.

Details of the procedure

Stent insertion

- we normally carry out stent insertion under a general anaesthetic (where you are asleep) or spinal anaesthetic (where you are awake but can feel nothing from the waist down)
- we usually give you an injection of antibiotic after a careful check for any allergies

- we pass a small telescope along your urethra into your bladder to view the whole lining of the bladder
- using X-ray guidance, we pass a stent into your ureter and use a special "pusher" to site the top end in the kidney and the bottom end in your bladder
- if your stent only needs to stay in place for 24 to 48 hours, we often use a stent which has a thread attached to its lower end that hangs out through your urethra; these stents can be removed easily by pulling on the thread
- we normally put a small catheter into your bladder overnight; this is usually removed before you go home
- you can expect to be in hospital for one night or less

Stent removal

- we normally remove a stent under local anaesthetic using a lubricant gel that numbs your urethra
- we usually give you an antibiotic after a careful check for any allergies
- we pass a small, flexible telescope along your urethra, into your bladder, and grasp the end of the stent with small forceps passed through the telescope
- we remove the stent and the telescope from your bladder
- the procedure takes only a few minutes, is normally performed on an outpatient (day case) basis and you can go home straight after

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
Mild burning or bleeding on passing urine which can continue until the stent is removed	 Almost all patients
Temporary insertion of a catheter which may cause pain, frequency and bleeding into your urine	 Almost all patients

A further procedure (flexible cystoscopy) is required to remove the stent at a later date		Almost all patients
Infection in the bladder requiring antibiotics		Between 1 in 10 & 1 in 50 patients
Failure to get the stent into the ureter requiring an alternative procedure		Between 1 in 10 & 1 in 50 patients
Permission for telescopic removal or biopsy of any abnormality found in the bladder		Between 1 in 10 & 1 in 50 patients
Delayed bleeding requiring removal of clots or further surgery		Between 1 in 50 & 1 in 250 patients
Injury to the urethra causing delayed scar formation		Between 1 in 50 & 1 in 250 patients
Anaesthetic or cardiovascular problems possibly requiring intensive care (including chest infection, pulmonary embolus, stroke, deep vein thrombosis, heart attack and death)		Between 1 in 50 & 1 in 250 patients (your anaesthetist can estimate your individual risk)

What is my risk of a hospital-acquired infection?

Your risk of getting an infection in hospital is approximately 8 in 100 (8%); 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 get some discomfort and bleeding when you pass urine; this may last several days

- you should drink twice as much fluid as you would normally for the first 24 to 48 hours, to flush your system through
- in six out of ten patients (60%), discomfort similar to cystitis may continue until your stent is removed
- 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
- if you develop a fever, severe pain on passing urine, inability to pass urine or worsening bleeding, you should contact your GP immediately
- we usually arrange a follow-up appointment for you, either to review your symptoms (if your stent has been removed) or to discuss stent removal/change (if you have had a stent put in)

Some stents need to remain in place for a long period of time; we usually change these stents periodically and your urologist will discuss this with you in more detail. For this, we use stents made from a different material to short-term stents, so they can stay in place longer before they need changing.

Short-term stents do not normally need to stay in for more than six weeks; contact your urologist or specialist nurse if you have not heard about removal of your stent within four to six weeks. Temporary stents, with an attached thread, only need to stay for 24 to 48 hours (see above).

Your specialist nurse or ward staff can provide you with an information leaflet giving advice about "Living with a Ureteric Stent".

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 (warfarin, aspirin, clopidogrel, rivaroxaban or 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.

Monitoring of patients with stents

Most urologists use the **BAUS Stent Register** to record their patients with ureteric stents; others have their own stent-tracking systems. This ensures that stents are removed or changed at the appropriate time, and not left in too long. Some basic patient data (e.g. name, NHS number and date of birth) are entered and securely stored in the BAUS register. This is required so that members of the clinical team can keep a close eye on how long your stent has been in place. BAUS staff cannot access these registers.

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 **0800 169 0 169**.

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.