

## Urology department

# Holmium laser enucleation of the prostate (HoLEP)

### 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 operation involves the telescopic removal of obstructing prostate tissue using a laser and temporary insertion of a catheter.

### What are the alternatives to this procedure?

Drugs, use of a catheter/stent, observation, conventional transurethral resection or open operation.



### What should I expect before the procedure?

If you are taking Clopidogrel on a regular basis, you must stop 10 days before your admission. This drug can cause increased bleeding after prostate surgery.

Treatment can be re-started safely about 10 days after you get home. If you are taking Warfarin to thin your blood, you should ensure that the Urology staff are aware of this well in advance of your admission.

You will usually be admitted on the day of your surgery. If not done on the day of your urology clinic appointment, you will normally undergo pre assessment on the day of your clinic or an appointment for pre assessment 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.

You will be asked not to eat or drink for six 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.

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)

### **What happens during the procedure?**

Either a full general anaesthetic (where you will be asleep throughout the procedure) or a spinal anaesthetic (where you are awake but unable to feel anything from the waist down) will be used. All methods minimise pain; your anaesthetist will explain the pros and cons of each type of anaesthetic to you.

The operation, on average, takes 45 to 90 minutes, depending on the size of your prostate.

You will usually be given an injectable antibiotic before the procedure after checking for any drug allergies.

The laser is used to separate the obstructing prostate tissue from its surrounding capsule and to push it in large chunks into the bladder. An instrument is then used through the telescope to remove the prostate tissue from the bladder. A catheter is normally left to drain the bladder at the end of the procedure.



### **What happens immediately after the procedure?**

There is always some bleeding from the prostate area after the operation. The urine is usually clear of blood within 12 hours, although some patients lose more blood for longer. It is very unusual to require a blood transfusion after laser surgery.

It is useful to drink as more fluid than normal in the first week after the operation because this helps the urine clear of any blood more quickly.

Sometimes, fluid is flushed through the catheter to clear the urine of blood.

You will be able to eat and drink on the same day as the operation when you feel able to.

The catheter is generally removed around 0600 hours on the morning after surgery.

At first, it may be painful to pass your urine and it may come more frequently than normal. Any initial discomfort and frequency of urination usually improves steadily within a few days. Some of your symptoms, especially frequency, urgency and getting up at night to pass urine, may not improve for several months because these are often due to bladder over activity (which takes time to resolve after prostate surgery) rather than prostate blockage. Since a large portion of prostate tissue is removing with the laser technique, there may be some temporary loss of urinary control until your pelvic floor muscles strengthen and recover. Pelvic floor exercises before and after surgery help to decrease the chance of any temporary loss of urinary control (incontinence).

It is not unusual for your urine to turn bloody again for the first 24 to 48 hours after catheter removal. Some blood may be visible in the urine even up to six weeks after surgery but this is not usually a problem. After the catheter is removed et your nurse know if you are unable to pass urine and feel as if your bladder is full. Some patients, particularly those with small prostate glands, are unable to pass urine at all after the operation due to temporary swelling of the prostate area. If this should happen, we would pass a catheter again to allow the swelling to resolve and the bladder to regain its function. Usually, patients who require re-catheterisation go home with a catheter in place and then return within a week for a second catheter removal which is successful in almost all cases.

The expected hospital stay is one night. It is safe for almost all patients to be discharged the afternoon after surgery.

## 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 one in 10)

- Temporary mild burning, bleeding and frequency of urination after the procedure
- No semen is produced during an orgasm in approximately 75% if the prostate is fully enucleated
- Treatment may not relieve all the urinary symptoms
- Infection of the bladder, testes or kidney requiring antibiotics
- Loss of urinary control (incontinence) which usually resolves within six weeks (10%); this can usually be improved with pelvic floor exercises

- Initial failure to pass urine after surgery requiring a new catheter for less than one week (10 to 20%)

### **Occasional (between one in 10 and one in 50)**

- Weakened erections or impotence (less than 5%)
- Injury to the urethra causing delayed scar formation (stricture) in 5%
- Finding unsuspected cancer in the removed tissue which may need further treatment (8%)

### **Rare (less than one in 50)**

- Retained tissue fragments floating in the bladder which may require a second telescopic procedure for their removal
- Very rarely, perforation of the bladder requiring a temporary urinary catheter or open surgical repair
- Persistent loss of urinary control which may require a further operation (0.5%)
- Possible need to repeat treatment later due to re-obstruction (less than 2%)
- May need self catheterisation to empty bladder fully If bladder weak (1%)
- Bleeding requiring return to theatre and/or blood transfusion (less than 1%)

### **Hospital-acquired infection (overall risk for Addenbrooke's)**

- Colonisation with MRSA (0.01%, two in 15,500)
- Clostridium difficile bowel infection (0.02%; three in 15,500)
- MRSA bloodstream infection (0.00%; 0 in 15,000)

(These rates may be greater in high risk patients eg 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?**

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.

Most patients feel pretty much back to normal within a week. Apart from some burning on urination you should not be in any pain. You may notice that you pass very small flecks of tissue in the urine at times within the first month as the prostate area heals. This does not usually interfere with the urinary stream or cause discomfort. It is normal to pass some blood in the urine (usually intermittently) for up to six weeks after surgery.

## **What else should I look out for?**

If you experience increasing frequency, burning or difficulty on passing urine or worrying bleeding, contact your GP.

In the event of severe bleeding, passage of clots or sudden difficulty in passing urine, you should contact your GP immediately since it may be necessary for you to be readmitted to hospital.

## Are there any other important points?

Removal of your prostate should not adversely affect your sex life provided you are getting normal erections before the surgery. Sexual activity can be resumed as soon as you are comfortable, usually after three to four weeks.

It is often helpful to continue with pelvic floor exercises as soon as possible after the operation since this can improve your control when you get home. The symptoms of an overactive bladder may take three months to resolve whereas the flow is improved immediately.

If you need any specific information on these exercises, please contact the ward staff or the Specialist Nurses. The symptoms of an overactive bladder may take three months to resolve whereas the flow is improved immediately.

The results of any tissue removed will be available after 14 to 21 days and you and you and your GP will be informed of the results by letter.

Around three months after surgery you will be reviewed in the outpatient clinic and several tests repeated (including a flow rate, bladder scan and symptom score) to help assess the effects of the surgery. Please come to your clinic appointment prepared to pass urine for a flow test.

Most patients require a recovery period of one to two weeks at home before they feel ready for work. You should avoid any heavy lifting or physical straining during this time. You should not drive until you feel fully recovered; one to two weeks is the minimum period that most patients require before resuming driving.

## 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 three 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?

Yes. We are currently assessing the effectiveness and safety of HoLEP. This involves a number of detailed tests performed before surgery which are then repeated several weeks after the procedure.

This is part of the ongoing audit process for developing technologies recommended by the National Institute of Health and Clinical Excellence (NICE).

## Who can I contact for more help or information?

### Oncology nurses

#### Uro-oncology nurse specialist

01223 586748

#### Bladder cancer nurse practitioner (haematuria, chemotherapy and 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 and 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](mailto: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 and security information)**

Telephone: +44 (0)1223 596060

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

Thank you for taking the trouble to read this patient information leaflet. 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 leaflet 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 patient information leaflet and I accept the information it provides.

Signature.....Date.....



We are now a smoke-free site: smoking will not be allowed anywhere on the hospital site.

For advice and support in quitting, contact your GP or the free NHS stop smoking helpline on 0800 169 0 169.

**Help with this leaflet:**

If you would like this information in another language, large print or audio format, please ask the department to contact

Patient Information: 01223 216032 or

[patient.information@addenbrookes.nhs.uk](mailto:patient.information@addenbrookes.nhs.uk)

**Document history**

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