Holmium laser enucleation of the prostate (HoLEP)

Your urologist has recommended a procedure called 'Holmium laser enucleation', used to treat enlarged prostate glands. This leaflet outlines what the procedure involves, including its benefits and risks. If there is anything you do not understand, please ask your doctor or nurse.

What is HoLEP?

This operation involves the removal of obstructing prostate tissue using a laser, followed by temporary insertion of a catheter to help the bladder drain normally. The procedure is carried out under a general anaesthetic (you are asleep) or a spinal anaesthetic (you are awake but unable to feel anything from the waist down). On average, the procedure takes 60-180 minutes, depending on the size of your prostate, and is carried out as a day case (you go home the same day).

Why do I need this procedure?

You have been diagnosed with urinary outflow obstruction (trouble passing urine) caused by an enlarged prostate. HoLEP is a treatment recommended for men with large prostates and for men on medications to thin the blood such as warfarin, aspirin or clopidogrel.

What are the alternatives to this procedure?

Alternative treatment options include: medication; use of a catheter to bypass the obstruction; observation; conventional transurethral resection (TURP) surgery, or an open operation.

What should I expect before the procedure?

If you are taking the blood-thinning agent clopidogrel on a regular basis, you must stop 7 days before your admission for the procedure as this drug can cause increased bleeding after prostate surgery. You can resume taking clopidogrel safely about 10 days after you get home. If you are taking warfarin or aspirin to thin your blood, you should ensure that the Urology staff are aware of this well in advance of your admission.

You will normally be asked to attend a pre-operative appointment two weeks before to assess your general fitness, to screen for the carriage of MRSA and to perform some health checks.

Please be sure to inform your pre-op assessment nurse or surgeon/anaesthetist 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 regular prescription for warfarin, aspirin or clopidogrel (Plavix®).
- A previous or current MRSA infection.
- A 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 on the day of the procedure?

You will usually be admitted on the day of your surgery. You will be asked not to eat or drink for 6 hours before surgery. After admission, you will be seen by members of the medical team which may include the consultant, anaesthetist and nursing staff.

At some stage during the admission process, you will be asked to sign the second part of the consent form giving permission for your operation to take place. This shows that you understand what is to be done and confirms that you wish to proceed. Make sure that you are given the opportunity to discuss any concerns and to ask any questions you may still have before signing the form.

Immediately before the operation, you may be given a pre-medication by the anaesthetist, which may make your mouth dry and make you feel pleasantly sleepy.

What happens during the procedure?

Either a full general anaesthetic or a spinal anaesthetic will be used. Both methods minimise pain; your anaesthetist will explain the pros and cons of each type of anaesthetic to you.In addition, you will usually be given an injectable antibiotic before the procedure, after checking for any drug allergies.

Once you are asleep or numbed, a 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 a telescope device 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?

In general terms, you should expect to be told how the procedure went and you should:

- Ask if what was planned was done and achieved.
- Let the medical staff know if you are in any discomfort.
- Ask what activities you can and cannot do.
- Feel free to ask any questions or discuss any concerns with the ward staff and members of the surgical team.
- Ensure that you are clear about what has been done and what you should do next.

What to expect afterwards

- There is always some bleeding from the prostate area after the operation. The urine is usually clear of blood after 12 hours, although some patients lose more blood for longer. It is unusual to require a blood transfusion after laser surgery.
- You should drink as much fluid as possible in the first 12 hours after the operation because this helps to clear the urine 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.
- You are likely to be sent home with a catheter on the same day with a plan to remove the catheter the following day.
- The catheter is generally removed at 8.30am on the first morning after surgery in Urology Procedures. At first, it may be painful to pass your urine and it may come more frequently than normal. Any initial discomfort can be relieved by painkillers such as Paracetamol and the frequency usually improves 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 removed with the laser technique, there may be some temporary loss of urinary control until your pelvic floor muscles strengthen and recover. We will give you a leaflet on pelvic floor exercises to help achieve this.
- It is not unusual for your urine to turn bloody again for the first 24-48 hours after catheter removal. Some blood may be visible in the urine even several weeks after surgery but this is not usually a problem.
- Let your nurse know if you are unable to pass urine and feel as if your bladder is full after the catheter is removed. 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 normally insert 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 couple of weeks for a second catheter removal, which is successful in almost all cases.

Are there any side effects?

As with any other medical procedure there is 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. The side effects you might experience include:

Common (greater than 1 in 10)

- Temporary mild burning, bleeding and increased frequency of urination after the procedure.
- No semen is produced during an orgasm in approximately 75% of men if the prostate is fully enucleated.
- Treatment may not relieve all the urinary symptoms.
- Poor erections (impotence in approximately 14%).
- Infection of the bladder, testes or kidney requiring antibiotics.
- Possible need to repeat treatment later due to re-obstruction (approx. 10%).
- Injury to the urethra causing delayed scar formation
- Loss of urinary control (incontinence) which reduces within 6 weeks (10-15%). This can usually be improved with pelvic floor exercises.

Occasional (between 1 in 10 and 1 in 50)

- May need self catheterisation to empty bladder fully if bladder weak.
- Failure to pass urine after surgery, requiring a new catheter.
- Bleeding, requiring a return to theatre and/or blood transfusion (less than 2%).

Rare (less than 1 in 50)

- Finding unsuspected cancer in the removed tissue which may need further treatment.
- 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 (1-2%).

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 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 tired and below par for a week or two because this is major surgery. 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.

What else should I look out for?

If you experience an increasing urge to pass urine, burning, difficulty on passing urine or worrying bleeding, please contact your GP, Urology Procedures (0118 322 8629) between the hours of 8.30am-4.00pm or Hopkins Ward (0118 322 7274 or 0118 322 7771) and speak to one of the nursing staff.

About 1 man in 5 experiences bleeding some 10-14 days after getting home. This is due to scabs separating from the cavity of the prostate. Increasing your fluid intake should stop this bleeding quickly but, if it does not, you should contact your GP or call Urology Procedures or Hopkins Ward and speak to one of the nursing staff.

In the event of severe bleeding, passage of clots or sudden difficulty in passing urine, you should contact your GP immediately or call Urology Procedures or Hopkins Ward (numbers as above) since it may be necessary for you to be re-admitted 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 3-4 weeks.

It is often helpful to start pelvic floor exercises as soon as possible after the operation since this can improve your control when you get home. If you need any specific information on pelvic floor exercises, please contact the ward staff.

The symptoms of an overactive bladder may take three months to resolve, whereas the flow is improved immediately.

The results of analysis on any tissue removed will be available after 7-10 days and you and your GP will be informed of the results by letter.

You will be reviewed in the Outpatient Clinic called Greenlands 2-3 months after your surgery and a number of tests may be done before that appointment, including a flow rate, bladder scan to help assess the effects of the surgery.

Most patients require a recovery period of 1-2 weeks at home before they feel ready for work. We recommend 3-4 weeks rest before resuming any job, especially if it is physically strenuous and you should avoid any heavy lifting during this time.

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.

Who can I contact for more help or information?

The Urology Procedures Department can be contacted for advice on weekdays between 8.30am – 4.30pm via the Urology Clinical Admin Team 0118 322 8629 or contact Hopkins Ward 0118 322 7771.

Further information and support

http://www.baus.org.uk/patients/patient+information/prostate/HoLEP
www.nhs.uk/conditions/incontinence-urinary/pages/introduction.aspx
www.bladderandbowelfoundation.org/

More information is available on the Trust website www.royalberkshire.nhs.uk

This document can be made available in other languages and formats upon request.

Information based upon procedure specific information for patients by the British Association of Urological Surgeons

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Urology Department, July 2020
Review due: July 2022