

## The Prostate Centre Guide to:

# HOLMIUM LASER PROSTATECTOMY

### Procedure Code M6532

You have been given this information sheet because your specialist has recommended treating your prostate condition with a surgical procedure known as **Holmium Laser Prostatectomy**.

The Prostate Centre team is on hand to answer any questions you may have about your preparation, hospital stay and follow-up. But the information given here covers the main issues and we hope you will find it useful. You will be given a separate sheet about fees, hospital charges and insurance issues where appropriate.

### Why is this operation necessary?

The prostate is a walnut-sized gland which lies just below the bladder, surrounding the urethra (the tube through which you pass urine). Its function is to produce the liquefying component of semen.

As a man grows older, his prostate gland almost invariably enlarges. This can cause pressure on the urethra, in effect narrowing the passage and making it difficult to empty the bladder. It can also cause other symptoms such as an urge to pass water frequently, or the need to get up several times during the night. Eventually, it may lead to complete blockage of the urethra, which is a painful and potentially dangerous condition. An enlarged prostate often causes a rise in PSA levels and this will need to be investigated to exclude prostate cancer.

The aim of Holmium Laser Prostatectomy is to remove or reduce the obstruction to your urine flow. It involves passing a fine telescopic instrument through the penis and up into the urethra. A high-powered laser is then inserted through the instrument and used to pare away the obstructing prostate tissue, which is then morcelated (ground up) and removed. When the surgeon is happy that a suitably wide passage has been made and the urethra is clear of obstructive prostate tissue, a catheter (soft flexible silicon tube) is placed into the bladder to drain the urine; this is left in place for around 24hrs. The removed prostate tissue is then sent to a laboratory for analysis.

## Benefits of Holmium Laser Prostatectomy versus other surgical options

The standard surgical treatment for an enlarged prostate is a procedure commonly known as TURP, in which an instrument is used to cut away the excess prostate tissue. Holmium Laser treatment offers the following advantages over TURP:

- Reduced bleeding during and after surgery as the laser seals the blood vessels within the prostate
- Time needed in hospital is usually less, 1-2 nights as opposed to 3 nights for TURP, as the catheter can usually be removed around 24hrs after your procedure.
- Particularly suitable for larger prostate glands (weighing more than 80g) with no real upper limit.
- More complete clearance of obstructing prostate tissue compared with TURP, meaning a reduced likelihood of further prostate growth or the problem recurring in the years after surgery.
- Particularly suitable for men taking blood-thinning medicines because the risk of bleeding is much reduced.

Another kind of laser treatment (PVP GreenLight Laser) is also available, This has most of the advantages of Holmium Laser Prostatectomy but is not suitable for large prostates or in circumstances where it is important to examine the tissue for the presence of cancer cells. PVP GreenLight Laser uses a different mechanism for removing prostate tissue, actually vaporising it so that no cells remain for collection.

Your surgeon will have discussed with you the pros and cons of using the Holmium Laser in your case.

The operation is performed under a general anaesthetic, and involves a 1-2 night stay in hospital.

## What are the risks and side-effects?

Even with the most experienced surgical team, this procedure carries potential risks and side-effects. A list of these can be daunting but it is important for you to understand that such complications may occur, even though many of them are rare and all can be dealt with. Your consultant and/or the nursing team will answer any questions you may have about this, as it is important for you to feel confident that you have been fully informed before giving your consent to the operation.

### Risks

- **Bleeding** There is much less bleeding with holmium laser compared with other surgical options and great care is taken during the operation to stop bleeding. However there is still a very small risk of blood loss requiring blood transfusion.

- **Problems relating to general anaesthetic** such as chest infection, deep vein thrombosis (DVT), stroke, pulmonary embolus, irregular heart beat. An operation under general anaesthetic always carries some risk, and very occasionally a person reacts badly to the anaesthetic.
- **Catheter blockage** Occasionally, the tube that has been inserted into the bladder for passage of urine while you are in hospital may become blocked by a small blood clot. This can usually be managed in your room but may require a return to the operating theatre.
- **Infection** The operation is performed under strict sterile conditions and you will be taking a course of antibiotics as a precaution. Nevertheless, there is still a small chance that you may get a urinary infection.
- **Urethral stricture**(2% risk). Occasionally, the urethra reacts to the passage of the instruments by narrowing some weeks or months after the procedure. This results in a reduction of the stream and may require further minor surgery.

### Side-effects

- **Bleeding** It is normal to have some blood in the urine after the operation. This should resolve after a few days; but it is quite common for some clots and debris to be passed in the urine around 10-14 days afterwards.
- **Discomfort and/or urinary frequency** Symptoms of burning on urination, or feeling the need to pass water frequently and urgently, are common to begin with. They will gradually resolve, but it may be 4-6 weeks before they disappear altogether.
- **Incontinence** The challenge is to take away enough prostate tissue to relieve your symptoms but not so much that you cannot stop the flow. Despite the surgeon's skill, it is inevitable that on occasion, a patient may be left with a degree of incontinence. This is a particular risk in very large prostate glands (>150cc) and where a catheter has been in place for months prior to surgery causing sphincter muscle weakness. This does however usually resolve with time.
- **Erectile dysfunction** This procedure should not affect your sexual function. However, a small number of men do feel they have diminished ability to achieve or maintain erections after they have had this procedure.
- **Infertility (Retrograde Ejaculation)** Removing part of the prostate gland usually causes the semen to flow back into the bladder during orgasm, rather than outside the body. You pass this semen when you next urinate. It is not harmful and most men do not find it bothersome; however it does mean that it is unlikely (although not impossible) that you will be able to father children following this operation. If there is a chance that you might still like to have children afterwards, you should consider having frozen semen samples stored in advance. We can advise you on providers of such services at your request.
- **Constipation** This can be a problem after your operation as your bowel can become slow and sluggish. It is recommended that you take a balanced diet with plenty of fruit and fibre to avoid becoming constipated. You may be prescribed a mild laxative or stool softener on leaving the hospital.

All forms of treatment can affect sexual function. Temporary use of drug therapy and mechanical aids can be helpful, and men can regain normal function over time – although some may need to continue with their preferred therapy in the long-term. In addition, the emotional impact of your diagnosis and treatment on both you and your partner, if you are in a relationship, should not be underestimated. So it is good idea to be aware of the changes that may occur, to manage your expectations and to understand what can be done to help you and your partner overcome any problems.

We take your sexual wellbeing very seriously at The Prostate Centre, because we know what a difference good advice and appropriate guidance can make. We are very fortunate to have on our team two dedicated and knowledgeable specialists; **Mrs Lorraine Grover and Dr Kam Mann**. We do strongly advise all patients that to give yourself the best possible chance of sexual recovery, you should address these issues early and consult Lorraine or Kam before as well as after your operation – maybe even while you are still weighing up your treatment options. We like to include your partner, but it is important even if you are not currently in a relationship.

## Preparation

### Consent

At some stage prior to your operation, you will need to sign a **consent form**. This gives your surgeon permission to perform the procedure and states that you have understood the risks and benefits of the surgery. If you sign the form well in advance – maybe at the time of a consultation with your urologist – you will be given a copy and it is a good idea to review it shortly before the day in case you need to ask any further questions. Please bring it with you to hospital. You will be asked to sign and confirm your consent again on the day of surgery.

### Pre-operative tests and assessment

You will be required to have some minor **pre-operative tests** (bloods, urine, ECG, MRSA swabs). These will be done at The Prostate Centre in advance of your operation in order to identify any problems with your general health and to help ensure your safety during the surgery and anaesthetic.

### Blood-thinning tablets

If you are on any medications to thin the blood, you must let us know as you will have to stop taking them before the procedure and may need an interim coagulation bridging plan.

- Warfarin: stop **five days** beforehand. We will need to re-check your clotting profile the day before the procedure
- Dabigatran (Pradaxa), Apixaban (Eliquis), Rivaroxoban (Xarelto) and Edoxaban (Lixinia) : stop **two days** beforehand

- Antiplatelet medication – clopidogrel (Plavix) and/or high dose aspirin: stop **seven to ten days** beforehand following the advice of your urologist/cardiologist.

**PLEASE MAKE SURE YOU CHECK WITH YOUR CARDIOLOGIST, GP OR OTHER PRESCRIBING DOCTOR THAT IT IS SAFE FOR YOU TO STOP TAKING YOUR MEDICATION.**

NB. Post-operative anticoagulation should also be discussed at this time. The information on post-operative anticoagulation outlined on page 6 of this booklet may not be relevant in your case

#### Other regular medication

- You can continue taking all your other medications.
- Please make sure you tell us if you are **allergic** to any medicines.

#### Eating and drinking

- You must fast (nothing to eat or drink) for at least **six hours** before your procedure. In practice, for a morning procedure, this means fasting from midnight. For an afternoon procedure, you may have a light breakfast at 6am.
- However, you can continue to drink water until **two hours** before your operation. In practice, this means up until your time of admission to hospital.

### What to expect in hospital

Your Holmium Laser Prostatectomy operation will be carried out at The London Bridge Hospital or The Princess Grace Hospital, and you will normally be admitted around 2 hours before the scheduled operation time. You can expect to stay in hospital for 1-2 nights.

#### What to bring with you

Make sure you bring with you to the hospital all **medications** you are currently taking (anticoagulants such as Warfarin/Plavix/aspirin should have been stopped well in advance, see page 4), as well as your Consent form if this has been completed beforehand.

Otherwise, you need to bring only those personal effects which you will use for a two-night stay (toiletries, glasses/contact lenses and solutions, reading materials, loose-fitting pyjamas with elasticated waist or a nightshirt if preferred, etc).

Arrangements for paying the hospital, surgeon and anaesthetist should already be in place, whether you are insured, sponsored or responsible for your own account. Your Patient Liaison contact at The Prostate Centre will provide you with these details.

## **Before the operation**

You will go through the admissions process and be shown to your room, where you will have a shower and put on a surgical gown. A nurse will run some final checks and you can expect some further tests at this stage. Anti-thrombus compression stockings will be fitted; these reduce the risk of blood clots forming in the legs and will remain on until you leave hospital. Your anaesthetist will come to see you and you will also have the opportunity to see your surgeon; you will be asked to confirm your consent by signing the Consent Form, even if you have signed this initially at The Prostate Centre.

## **The procedure**

When you are ready to go to theatre you will be escorted down to the anaesthetics room on foot, as most patients prefer this to being wheeled on a trolley! You will have a drip line inserted into your arm for intravenous access; and then the anaesthetic will be administered.

During the procedure, which should take a couple of hours to complete, you will be given an intravenous infusion of the antibiotic Gentamicin 160mgs as protection against infection. A catheter (soft flexible silicon tube) will be inserted into the bladder via the penis, in order to drain the urine, and will usually be left in place for 24 hours.

## **Recovery**

You will be transferred back to your room to recuperate. You will be receiving intravenous fluids, but once you are fully awake and ready, you will be allowed to start drinking. Later on you may eat a normal meal. You should feel little or no pain; but if you do, please let the nurses know so that they can arrange for it to be managed.

You will find urine draining through your catheter into a bag. It is often blood-stained at this stage. Although it will turn from red to yellow after a few days, it is not unusual to find blood in the urine intermittently for some weeks after the operation. The catheter will be removed in good time to make sure you can pass water naturally before you go home.

## **Companions and visitors**

Your wife or partner will naturally be anxious to hear that the operation has gone well, and may want to come with you to hospital and wait for the news to be given personally by the surgeon. Alternatively, a telephone number can be left for the surgeon to call and this will be done as soon as possible after the procedure.

There are "open access" visiting hours for family members but please ask other visitors to check with the nurse in charge before coming to see you, as there will be times when you should not be disturbed. If you live out of London, our Patient Liaison team can supply your wife or partner with a short list of hotels nearby.

Your surgeon and/or others from the Prostate Centre team will normally visit once or twice per day, until you are considered fit for discharge.

## **Going home**

The doctor in charge will decide when you are ready to leave hospital. Please remember to take all medicines which you have brought with you or been prescribed to take home.

You should arrange for someone to collect you from hospital. You will not be able to drive yourself.

## What to expect when you get home

### General recovery

You should not forget that although you may feel comfortable and have no external wounds, you have still had a significant operation and will need a period of time to recover before returning to normal activities. Do not “overdo it” by attempting to lift shopping or suitcases, mow the lawn etc; you could provoke bleeding and delay recovery. We recommend that you take life very gently for at least 10 days after you leave hospital with no strenuous activity for 4 weeks. You will be given pain relief to take home and use as needed.

Be sure to **increase your fluid intake** to help flush the system, especially if there is much post-operative bleeding. It is important that you do not become constipated after your procedure; so you will be given a mild laxative to use if required. Do make sure, too, that you eat plenty of fresh fruit and vegetables.

### Will I need nursing care?

You should not need a nurse at home. Obviously it is reassuring to have your partner looking after you, or otherwise to put friends on standby who can stay with you or on whom you can call if necessary.

### When can I start exercising?

Gentle walking is encouraged when you get home. After about 2 weeks you can begin jogging and aerobic exercise, though nothing too strenuous. Heavy lifting must wait until at least 4 weeks after surgery.

### When can I start driving?

Do not attempt to drive for 2 weeks. You must not risk an emergency stop involving a sudden twist or jerk. Also, your car insurance may not cover you in this post-operative period.

### When can I have sex again?

Avoid sexual activity for 4-6 weeks, as long as you feel able and comfortable enough to do so. You may pass a little blood with your semen for the first few weeks. Remember that although erections and orgasm should be unaffected, you will not produce an ejaculate as before; therefore you will almost certainly (though not 100% reliably) be infertile.

### When can I go back to work?

If you have a sedentary job, and assuming normal recovery, you could be ready to return to work after 2 weeks. Many men, however, prefer to take the opportunity to have a break from work for another week or two. Heavy or manual work should not be attempted until 4 weeks after the operation.

## When can I fly, go on holiday or return overseas?

Many patients like to book a holiday as a means of continued recuperation, and many overseas patients want to return home as early as possible. It is advisable to wait two weeks before leaving, so that you are beyond the period when secondary bleeding and clotting is most likely to occur. You should also bear in mind that the destination is an important factor: travelling to a seaside resort in France or visiting family in New York, where you can expect excellent medical care in the event of any problem, is not the same as going on safari in the African bush. Please ask the advice of our medical team if in doubt.

## Problems you may encounter

### Discomfort

It is normal to feel a burning sensation on passing urine and you may feel the need to pass urine frequently and/or urgently. If you are uncomfortable, mild painkillers such as paracetamol should be adequate. These symptoms should clear quickly, but at worst, may last for up to 6 weeks.

### Infection

Despite the antibiotics that you will have been given, there is always a risk of urinary infection after this operation. If the common symptoms of burning, frequency and urgency are intense, or accompanied by cloudy or smelly urine, or fever, you may have an infection. In this event you should call The Prostate Centre as you are likely to need further antibiotics. We will probably ask you to supply another urine specimen for analysis.

### Blood in the urine

Almost everyone will notice some blood in the urine. Initially the urine may be quite red, and may even contain small clots. You should be sure to drink plenty of water to help flush through any residual blood. The redness and debris will soon clear, although you may notice a pinkish tinge for several days. Occasionally, at around 10 days post-operatively, you may notice some secondary bleeding or pass further small clots. This is quite normal and nothing to be concerned about; it should soon settle. However, if the amount of blood increases, or larger clots form, contact us at The Prostate Centre during opening hours, or at other times call the hospital where your operation took place.

### Difficulty with passing water

If you do have difficulty in passing water after the catheter is removed and you have left hospital, it is important to **contact us urgently** or go to your local accident and emergency department. There will probably be a clot blocking the outlet from the bladder and this will need to be flushed out with water introduced via a catheter.

## Pelvic floor exercises

An important factor in regaining your urinary control is to ensure that the relevant muscles recover their tone and strength. This can be achieved by performing special

exercises for the pelvic floor. You cannot do them effectively while your catheter is in place but once it is removed and you are out of hospital, you should start straight away.

The pelvic floor is a strong sling, or hammock, of muscles that help to support the bladder and the bowel. The muscles stretch across the inside of the pelvis and are attached to the pubic bone at the front and the coccyx (tail bone) at the back. These muscles naturally relax when you pass urine, to let the flow through, then tighten again at the end of the flow to prevent leakage.

There is a knack to doing pelvic floor exercises and you will need to learn it. Ideally you should aim to begin performing the exercises regularly in the lead-up to the operation. If you have not been doing so or have not yet learnt how to do them, you will be taught before you leave hospital.

### To locate the correct muscles

- When passing urine, try to stop the flow by contracting your muscles up and inwards; then let go. Don't worry if the flow did not stop altogether.
- Pretend you are controlling an attack of diarrhoea and pull up the muscles around the back passage.

### To perform the exercises

- Sit comfortably on a chair with your legs apart and your feet flat on the floor. Lean forward and rest your forearms on your thighs.
- Draw up both sets of muscles (as above) at the same time. Hold for a count of five, then let go slowly.
- Pause for a count of five. Then repeat this until you have done a total of five contractions.
- Aim to keep your stomach, thigh and buttock muscles relaxed and use only your pelvic floor muscles. Using other muscles will defeat the purpose of the exercise.

### Getting into the habit

You need to build strength and endurance of your muscles and this requires regular exercise, just like an athlete in training. To achieve best results, perform the set of five-ten contractions three times every day. In addition, you should perform one set of 20 short sharp pelvic floor contractions each day.

It is likely that several weeks of regular exercise will be necessary before an improvement is apparent. However you should persevere, and continue the exercises even after you start to notice the improvement. To help you remember, try to make the exercise a part of your daily routine, for example by scheduling each set of contractions to accompany a certain daily task.

## Follow-up: continuing care

- Please call the nurses at The Prostate Centre **2 weeks** after your operation to give a progress report.
- Please make an appointment with your surgeon **6 weeks** after the operation. You should arrive with a comfortably full bladder as we will need to measure your

flow rate, and also take a urine sample to check that there is no underlying infection.

- At that time, we will discuss with you when your next follow-up appointment should be (usually **three months** later).

## For urgent medical assistance

Contact us **immediately** if you are experiencing:

- Any pain that medication does not relieve
- Large amounts of clots in the urine that seem to be blocking the passage of urine
- Bladder spasms that are not relieved with pain medication
- Nausea or vomiting
- High temperature or sweats

## Contact numbers

- The Prostate Centre **020 7935 9720**  
(9am-5pm Monday-Friday)
- The London Bridge Hospital, H2 Urology Ward **0203 905 4231**
- The Princess Grace Hospital 5<sup>th</sup> Floor **0207 908 2476**
- Your urologist .....