

## **HoLEP (Holmium laser enucleation of the prostate). Information for patients.**

### **What does the procedure involve?**

This operation involves the telescopic removal of obstructing prostate tissue using a laser and temporary insertion of a catheter which is removed the day after surgery in the majority of men



## **What are the alternatives to this procedure?**

Observation, modifying fluid intake, medications, use of a catheter, 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. You will normally receive an appointment for pre- assessment before your admission, to assess your general fitness and to perform some baseline blood and urine tests. After admission, you will be seen by members of the medical team who will include the Consultant, your anaesthetist and your nurse.

You will be asked not to eat or drink for 6 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.

## **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 45-120 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 after 24 hours, although it is quite common to see some blood in the urine, often intermittently, for

even up to 6 weeks after surgery. This is not a concern surgically, and although blood in the urine may seem alarming to some people it is usually only a small amount of blood that is lost. It is very unusual to require a blood transfusion after laser surgery.

It is useful to drink more fluid than normal in the first 24 hours 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.

Many men are surprised at how comfortable they are after laser prostate surgery. Apart from some minor discomfort from the catheter irritating the penis and bladder, it is usual not to have any pain as such.

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 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 can be relieved by tablets or injections 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 overactivity (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 (which means you will have excellent relief of prostate blockage and have a very low risk of ever needing a repeat prostate operation), there may be some temporary loss of urinary control until your pelvic floor muscles strengthen and recover. This is why pelvic floor exercises are taught prior to surgery. If you do these exercises as advised, the risk of urinary incontinence after surgery is very low and if it does occur it normally resolves completely within a few months (often within days). Any incontinence is normally managed by wearing a pad inside the underpants. The need to use pads beyond 3 months occurs in less than 2% of men.

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 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 average hospital stay is 1-2 days.

## **What should I expect when I get home?**

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 increasing frequency, burning or difficulty in passing urine or worrying bleeding, please contact your doctor.

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 help stop this bleeding within 24 hours but, if it does not, you should contact your urologist or your GP who may prescribe some antibiotics for you. In the unlikely 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 re-admitted to hospital.

## **Are there any other important points?**

Removal of your prostate should not adversely affect your ability to have an erection provided you are getting normal erections before the surgery. It is very common not to be able to ejaculate any semen at the point of orgasm after prostate surgery. This is because after surgery it is much easier for the semen to travel back into the bladder than down and out through the penis. This is not an uncomfortable or harmful consequence of surgery, and most men say the experience of orgasm remains a pleasurable sensation. This is only a major issue if you intend fathering children in future. Sexual activity can be resumed as soon as you are comfortable, usually after 3-4 weeks.

It is often helpful to recommence 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 3 months to resolve whereas the flow is improved almost immediately.

The results of any tissue removed will be available after 14 – 21 days and you and your GP will usually be informed of the results by letter. If any results are best discussed with you in person, an appointment will be made for you to be seen in the clinic soon after the results become available.

You will be reviewed in the outpatient clinic and several tests repeated (including a flow rate, bladder scan & symptom score) to help assess the effects of the surgery. This is usually 3 months after the surgery to allow time for your waterworks to settle into a new pattern.

Most patients require a recovery period of 1-2 weeks at home before they feel ready for work. We recommend 2 weeks' rest before resuming any job, especially if it is physically strenuous and you should avoid any heavy lifting during this time. You should not drive until you feel fully recovered; 1 week is the minimum period that most patients require before resuming driving.

## Are there any side-effects of the operation?

### Common side-effects (greater than 1 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, but if this is the case a medication can

sometimes help if required

- Infection of the bladder, testes or kidney requiring antibiotics (approx 10-15%)
- Failure to pass urine immediately after surgery requiring placement of a new catheter which is then

removed (almost always successfully) within a week (10-15%)

### Occasional side-effects (between 1 in 10 and 1 in 50)

- Loss of complete urinary control (incontinence) which normally resolves within 6 weeks (less than 10%); this can usually be improved with pelvic floor exercises
- Weaker or no erections. 2 recent studies have shown no significant difference in ability to have an erection in men before and after HoLEP surgery but there is still a small risk (probably less than 5%) of a decreased ability to have an erection. Some men's erections improve after surgery
- Injury to the urethra causing delayed scar formation requiring further minor surgery (5%)
- Finding unsuspected cancer in the removed tissue which may need further treatment (5%)

### Rare side-effects (less than 1 in 50)

- Need to repeat treatment later due to re-obstruction from prostate regrowth (approx 1% in the first 7 years after surgery)
- Self-catheterisation or permanent catheter to empty bladder if the bladder is weak (1%)
- Persistent loss of urinary control which may require a further operation (less than 1%)
- Retained tissue fragments floating in the bladder which may require a second telescopic procedure

for their removal (less than 1%)

- Very rarely, perforation of the bladder requiring a temporary urinary catheter or open surgical repair

(less than 0.5%)

- Bleeding requiring return to theatre and/or blood transfusion (less than 0.5%)

## **Here's what the experts have to say about holmium laser treatment for BPH:**

"The HoLEP has replaced standard TURP completely and unreservedly in our hospital. There is nothing out there that has been shown to be better."

Peter Gilling, MD, Consulting Urologist at Tauranga Hospital, Tauranga, New Zealand and holmium laser prostatectomy pioneer:

"Use of the Ho:YAG laser for treatment of BPH is an important new technique that offers significant advantages over TURP....In a phrase, HoLEP compared with TURP provides 'maximal benefit with minimal morbidity'....I would envision that every significant urology department will have a holmium laser at their disposal. It is a basic tool for stones and BPH, two of the most common conditions urologists treat." "HoLEP represents a paradigm shift in the surgical management of BPH and is endorsed by all the leading urological organizations world-wide. We have used this technique exclusively with over 2,000 patients since it evolved in the late 1990's. Once learned, HoLEP replaces both TURP and open prostatectomy, providing superior outcomes in prostates of all sizes!"

## **Here's what some of our patients say about HoLEP:**

Mr DB, 70yr

Before the operation I was getting up at least 3 times during the night. I had to urinate very frequently during the day. I knew the location of all the Public Gents in Cambridge and all the pubs where you could use the Gents without buying any beer. Urination flow was poor and incomplete with dribbling. Erections poor and not long lasting. (I was) increasingly very tired and weak, unable to cycle because of soreness. Everything (was) an effort.

Four months after the operation: Urine flow excellent, with good immediate force, no interruptions and no dribbling. Much longer periods between urination. Some nights I sleep through without waking. Erections excellent. Much more energy, back to cycling and gardening. I feel as though I have been rescued from poisoning and liberated back to a normal life.

My family join me in thanking you very much indeed for the expert help you gave me during the recent operation.

Mr BG, 72yr

My recollection as a young man was being able to pee over a five bar gate onto a mushroom on the other side. However, during the years prior to my operation I found it difficult to pee on to a mushroom six inches from my feet. It gives me great pleasure to now record, following my operation, that I am now able to circumnavigate the above gate once again. Yip-pee!

Within 3 weeks I was playing golf again. Within a week I was walking quite briskly and swimming as well. And within 4 weeks I was performing again with my dear wife. I have to record that I was wrong to put off this operation for so long. When I think back at the disturbed nights peeing 3 or 4 times if I was lucky, 3 total blockages when I had to have a catheter inserted, watching out for when and what I had to drink. It really was not worth the delay.

So to Mr Aho and his team very many thanks. You did a splendid job and I shall be eternally grateful.

Mr HGM, 68yr

"Presenting problem: Significant prostate bleeding and very large prostate despite previous prostate vaporisation procedure.

My experience started some 5000 miles from the shores of the UK. Early one morning I noticed that my urine was bright red. There was obviously something very wrong and I would need urgent medical assistance to stop the bleeding. My local doctors successfully accomplished this but informed me that I would need to have an operation to reduce the size of my prostate.

In the process of deliberation over where this procedure should be done, we discovered through the marvel of the internet the HoLeP procedure (Holmium Laser Enucleation of the Prostate) at the Spire Cambridge Lea Hospital, where one of the best HoLeP centres is located. My prostate was about 10 times the normal size. Coincidentally I had earlier been referred to the same hospital to have a cataract operation on both my eyes.

The challenge was whether the consultants and supporting medical staff from two separate disciplines were in a position to coordinate their surgical procedures within a given time scale, particularly as the prostate operation called for prompt action.

All in all, three surgical operations were carried out within an eight day period and I can testify that all were remarkably successful. Throughout the process I experienced little or no pain; and I only spent about three days in hospital. My prostate has been successfully reduced in size and all functions have returned to normal with no side effects. According to my consultant surgeon (Mr Tevita Aho), I should never need to have another intervention for prostate problems.

Finally you may be interested to know that I did not have to mortgage our home or the grandchildren's inheritance to accomplish this feat. The medical bills were all inclusive, modest in their amount and were easily settled within my credit card limit"

Mr ID

USA

Dear Mr. Aho,

I can't tell you how thrilled I am with the results from my HoLEP surgery - for more than a decade I had to

sit to urinate (couldn't get enough stream going to stand) and now I feel like a boy again! Having researched the HoLEP procedure on-line, I was aware of your renowned reputation in the field so your excellent skills and experience as a surgeon and urologist were to be expected but I was pleasantly surprised to find you also had such a wonderful rapport with your patient easily explaining everything so clearly and taking the time to answer any and all questions). All phases of my treatment - from when I originally contacted Janice at Cambridge Urology Partners to arrange the surgery, the admission and pre-op at Spire Cambridge Lea Hospital, the surgery and recovery, to the final post-op appointment - were superb. The efficiency and helpfulness of everyone involved were truly impressive.

Following the successful surgery, I was able to be released earlier than expected the next day since I was "voiding successfully" within 7 hours of the catheter being removed and I did not have to use any pain medication at all after the surgery. Since you were able to remove the uric acid kidney stone lingering in my bladder during the procedure, that was a huge added benefit! It was also so considerate of you to schedule the post-op appointment back at Spire Cambridge Lea Hospital since that was more convenient for me (how often do you find

specialists doing that? - definitely would never find that happening where I live).

The surgery was August 18 and I was back home in South Carolina by the night of August 27 still amazed at how great my waterworks are functioning.

Again, many thanks to you and your team for everything - I am so grateful that I chose to come to Cambridge for treatment (it was a fraction of what it would have cost here in the U.S. and was light years better treatment).

Mr AS

Bedfordshire

Dear Mr Aho

I would like to thank you especially for carrying out the HoLEP procedure but also to thank you and your staff for all the peripheral work carried out. Janice has been an absolute star in setting up the initial date and in liaising with my insurer to enable payment which helped immensely , particularly in reducing my stress levels prior to the operation

I'd like to reiterate that the HoLEP procedure you carried out gave me a step change in quality of life. My urine flow now starts on demand and stops when I've finished, the flow rate is also markedly increased. However, the real positive changes have been to remove the worry of further acute urinary retention and to come off tamsulosin

Mr RR Norfolk

Dear Tev

Both (my wife) and myself are very grateful that you were able to perform the operation so quickly and, more importantly, so successfully. Thanks again for all that you have done

Mr JH Worcestershire

Dear Mr Aho

I'd like to thank you very much for performing the HoLEP on me. The aftermath of the procedure turned out to be almost painless, and I was very happy to be discharged the day after the operation. I would also like to thank Janice for responding so promptly and helpfully to my questions.

The overall improvement in flow is dramatic, to say the least. It is a long time since I could stand well back from the toilet pan and hit the back of the pan in a forceful jet! But now I can. There is a noticeable sense of having cleared my bladder, something I haven't felt for a long time.

I resumed sex with my wife on Day 15 with absolutely no discomfort, although there was no sense of definite ejaculation.. Absolutely no erectile dysfunction, whereas before the operation my erection tended to lapse after a while

Mr AF Suffolk

Dear Mr Aho

I really want to thank you most sincerely not only for your expertise but also for the patience with which you explained the HoLEP procedure and the gentle way in which you annulled all my fears and those of my wife. As you so rightly said it was an operation without any pain. Now that I am released from all the external plumbing and with everything back to working order I am looking forward to a tranquil and comfortable future.

**For more information about HoLEP including an update of clinical research of this cutting edge technology, please see our website.**

**Procedure Code for insured patients: M6532**