Aquablation of the prostate

Information for patients, relatives and carers

This leaflet contains evidence-based information about your proposed urological procedure – “Aquablation of the prostate”

Aquablation Patient Information Leaflet
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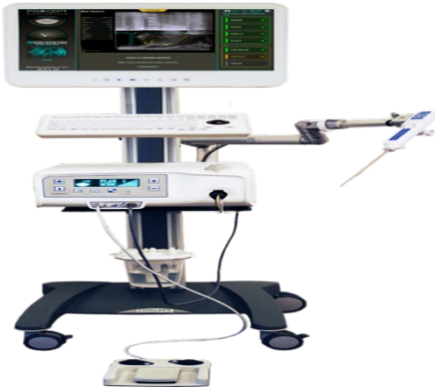
IMPORTANT POINTS

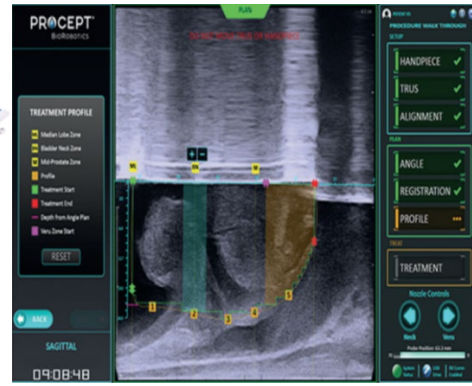
- Aquablation involves high velocity waterjet ablation of prostate tissue to improve the flow of urine
- The high pressure waterjet saline stream is delivered via a robotic handpiece inserted into your urethra (waterpipe) through a telescope
- The surgeon will be able to remove obstructing prostate tissue accurately using ultrasound mapping
- A bladder catheter will be used after the operation to wash out blood clots
- The most common after affects are temporary bleeding, burning, urinary frequency and urinary retention. Loss of semen emission during ejaculation occur in small proportion of patients.

WHAT DOES THIS PROCEDURE INVOLVE?

Aquablation using the Aquabeam system (from PROCEPT BioRobotics) combines high velocity waterjets with accurate mapping of the prostate using real time transrectal ultrasound imaging.
The Aquabeam system delivers a very fine, very high pressure waterjet to 'wash out' prostate tissue much like a windscreen washer. This aims to create a wide hole through the prostate without any use of heat.
An ultrasound probe in the rectum provides images of the prostate.A robotic handpiece device with a telescope is guided down the waterpipe into the bladder. By combining the handpiece and the real time ultrasound images, the surgeon uses the software to map out the important landmarks of the prostate and plan a procedure tailored to the patient's individual anatomy.

The handpiece is removed, any clot and tissue washed out and a catheter (a tube with 3 channels) is placed under ultrasound control down the waterpipe, through the prostate ad into the bladder.
Water irrigation is then flowed through one catheter channel and out through another, washing any blood out to ensure no clots form.





Aquabeam robotic system Real time Ultrasound imaging

WHAT ARE THE ALTERNATIVES?

- Conservative treatment – restricting your fluid or caffeine intake to improve your urinary symptoms and help you avoid surgery
- Drug treatment – using either finasteride (to shrink your prostate) or drugs which relax the muscles in the prostate (e.g. tamsulosin) to improve urine flow
- Transurethral resection of the prostate (TURP) – removing the central, obstructing part of your prostate with electric current, using a telescope passed along your urethra
- Holmium laser enucleation of the prostate (HoLEP) – removing all the obstructing prostate tissue with a laser, using a telescope passed along your urethra
- Photo-selective vapourisation of the prostate ("green light" laser prostatectomy) – using a different type of laser to vapourise (burn away) the obstructing prostate tissue, using a telescope passed along your urethra
- Other minimally invasive surgical procedures that aim to improve symptoms but without removing tissue include Urolift, Rezum, iTIND and Prostatic Artery Embolisation

BEFORE THE PROCEDURE

We will invite you to come to a Pre-op Assessment Clinic before your operation. The purpose of this appointment with our pre-operative nurse is to organise any more tests that may be needed and ensure you are fit for surgery

Please bring in a list of any medicines that you normally take at home and let us of know any drug allergies you may have. Depending on what medicines you take, you may be asked to have your normal medicine regime or some may be withheld and given to you after the operation. Taking medicines before the operation is safe and will not put you at risk.

It is important to let us know if you are on any drugs that thin the blood, e.g., aspirin, warfarin, clopidogrel, dipyridamole, endoxaban, apixaban, etc., as you may have to stop taking these for a short time before the operation.

If you are taking warfarin, we may need to bring you into hospital a few days before your operation or to change the warfarin to an injection that can be given at home.

Please inform the nurse if you have an implanted foreign body (pacemaker, prosthetic heart valve, stents or joint replacements); and if you have at present or have previously had MRSA infection.

WHAT HAPPENS ON THE DAY OF PROCEDURE?

Please bring a supply of your usual medicines to take whilst you are in hospital. Please report to the hospital reception when you arrive.

If there are any more tests that we have not already carried out before admission, we will perform them before your operation.

You may eat a light meal and drink normally up to 6 hours before your operation. From that point, you will need to starve (nil by mouth) to reduce the risk of problems during the anaesthetic.

We will ask you to put on a theatre gown and to wear some special TED stockings during and after the operation. These stockings aim to reduce the risk of developing blood clots (DVT) in your lower legs.

Your surgeon or a member of the surgical team will see you to discuss the procedure and obtain informed consent from you. An anaesthetist

will see you to discuss the options of anaesthesia and also discuss pain relief after the procedure with you.

DETAILS OF THE PROCEDURE

For the procedure, we normally use a general anaesthetic (where you are asleep). You will be given an injection of antibiotics before the procedure, after you have been checked for any allergies.

Once you are under general anaesthesia, the surgeon will insert an ultrasound probe into your rectum to obtain real time images of your prostate. Then the surgeon will insert the handpiece with telescope down the urethra and start planning treatment, based on what they can see. The surgeon will then start the aquablation process to wash away the prostate tissue, which usually lasts for a few minutes.

Once the tissue has been removed from the prostate, the surgeon will wash out the bladder to remove prostate tissue and blood clots. Bleeding will then be controlled with targeted or focal electro-cautery. The surgeon will insert a 3 way urinary catheter into your bladder.

Then the surgeon will start irrigating (washing out) your bladder with saline and this will continue in the recovery room and on your return to the ward. Initially, this can give a sensation of the constant need to pass urine, but it is being constantly being drained into a bag.

After you return to the ward, the nurses will check your blood pressure, pulse and temperature regularly and, as soon as you feel able, you will be allowed to drink and eat.

Some men have the urge to pass urine even when the catheter is in place; this can be caused by the catheter irritating the bladder lining. After your procedure, a member of the urology team will review you and discuss the operation. You will then return to the ward and the continuous bladder irrigation will continue.

The irrigation is continued usually over the first night and more

commonly now, if bleeding is still well controlled, this can be stopped the following day. Once the catheter is removed, we need to be sure that you are able to void urine in the normal way. If you are passing urine well without much residual urine left behind (checked with a bladder scan), you will be discharged.

Approximately 5 – 10% of men are unable pass urine appropriately; in that instance a smaller, softer catheter is passed, you will be discharged home with that in place and arrangements made to return a few days later for another trial of without catheter (TWOC).

It is normal to have some pain or discomfort after operations, and we will prescribe you painkillers to help keep it under control.

You can return to work when you feel comfortable, which will depend on your job. We normally recommend 2 weeks' rest. If in doubt, please check with your surgeon and obtain a sick note before you are discharged.

ARE THERE ANY AFTER-EFFECTS?

The common possible after-effects following this procedure and your risk of getting them are shown below :-

- Temporary burning and stinging when you pass urine – 10-20%
- Temporary bleeding in your urine (may last up to 4 week) - common
- Bleeding requiring a blood transfusion or re-operation – 1%
- Delayed bleeding 1-2 weeks after procedure – 2%
- Pain or discomfort in your pelvic area – 4%
- Urinary tract infection – 7%
- Inability to pass urine (urinary retention) following removal of catheter - 5-10%
- Urinary frequency and urgency (up to a month) – common
- Ejaculation issues (retrograde or dry) – 11%
- Urethral stricture (delayed scar tissue) causing narrowing – 1%

- Anaesthetic or cardiovascular problems possibly requiring intensive care (including chest infection, pulmonary embolus, stroke, deep vein thrombosis, heart attack and death) – 0.4-2%

BEFORE YOU GO HOME

We will explain to you how the procedure went and advise you what symptoms you should expect and what you can (or cannot) do at home. Your surgeon or nurse will also give you details of who to contact, and how to contact them, in the event of problems.
You will be advised when to restart your drugs that thins your blood (eg aspirin, warfarin, apixaban etc) following the procedure.
You will be given a copy of your discharge summary and a copy will be sent to your GP.
You will be given medications to take at home from the hospital pharmacy.

WHAT CAN I EXPECT WHEN I GET HOME?

You should drink enough fluids for first 2 days to flush out the residual bleeding and reduce any risk of infection.

If there is heavy bleeding or you are unable to pass urine; or if you have fevers/feeling unwell, you should contact the hospital or specialist nurse, see your GP or go to an Emergency department.

If you were discharged with a catheter in place, the nurse will have given you an appointment to return for a trial without catheter. When you come back to have the catheter removed, please try to arrive having drunk enough fluids. After the nurse removes the tube, they will ask you to pass urine into a container to measure the amount, and use a scanner to detect the volume of any urine remaining in your bladder. If the nurse is happy with the results you will be discharged.

Within a few days you will be able to resume normal activities and should notice improvements within 2 weeks, although it may be 3 months before the full benefit is evident.

If you have any problems with passing urine, you may need to have a

catheter in place for a while longer. The nurse will discharge you with the new catheter and give you an appointment to return for another trial of removing the catheter.
You may see blood in your urine and ejaculation fluid for a few weeks.
A mild burning sensation, frequency and urgency may persist up to a few weeks after the procedure.

There are a few sensible precautions to take when at home and we would advise you not to:-
Strenuous activities or exercise or long distance travel for 4 weeks
Have sexual intercourse for 1-2 weeks
Driving for 2 days
If you would like to discuss issues post operation, please call the hospital ward or the consultant's secretary.

Disclaimer

The information provided here in this leaflet have been generated to provide an accurate and up to date information as possible. However, there may still be errors in this leaflet. Please discuss any concerns you may have with your doctor.