DR. ARVIND VASUDEVAN
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Procedure Specific Information Sheet

ROBOTIC RADICAL PROSTATECTOMY

WHAT IS THE PROSTATE?

The prostate is a gland that is only found in men. It lies just below the bladder and in front of the rectum. It makes fluid that forms part of the semen. It surrounds the urethra (the tube that carries urine and semen through the penis and out of the body).

WHAT IS PROSTATE CANCER?

Prostate cancer is when abnormal cancer cells grow in the prostate and may spread from the prostate to other parts of the body, especially lymph nodes and bones.

WHEN IS RADICAL PROSTATECTOMY DONE?

By now Dr Vasudevan would have done the necessary investigations such as MRI of the prostate, prostate biopsy and any other staging investigations. When the investigations confirm that the prostate cancer is contained within the prostate and has not left the confines the prostate then a radical prostatectomy can be done as a curative procedure.

HOW CAN A RADICAL PROSTATECTOMY BE DONE?

A radical prostatectomy can be done either with an incision in the lower part of the abdomen, known as an **Open Radical Prostatectomy**, or it can be done in a minimally invasive way with the assistance of a machine called a Robot, also known as **Robotic Radical Prostatectomy (RRP)**. **Dr Vasudevan does both types of procedures.** To know more about open prostatectomy please refer to the procedure information sheet on open prostatectomy. This information sheet focuses on Robotic Radical Prostatectomy.

WHAT HAPPENES IN THE PRE-OPERATIVE CONSULTATION?

Dr Vasudevan will have by now discussed your diagnosis with you and the treatment options available to you. In consultation with you, if a Robotic radical prostatectomy is decided as your preferred treatment option then Dr Vasudevan will:

1) Organise routine blood and urine tests to be done about 10 days prior to your procedure

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2) Refer you to a pelvic physiotherapist to be taught pelvic floor exercisers prior to surgery so that you can start practising the pelvic floor exercises, as this improves and shortens your time taken to return to urinary continence.
3) Go through the consent process for the surgery, which will include a detailed discussion about post-op urinary continence and erectile function.
4) Advise you if any of your medications need to be stopped prior to surgery.
5) Organise a date for your operation
6) Also refer you to the prostate cancer nurse in his rooms so that further assistance can be given to you by the nurse in treating your prostate cancer.
7) Instructions will be given to you in regards to fasting times and hospital admission time.

WHAT DOES ROBOTIC RADICAL PROSTATECTOMY INVOLVE?

Robotic radical prostatectomy is a type of minimally invasive surgery which uses surgical robotic equipment to remove the entire prostate. The robotic laparoscopic technique allows surgeons to operate through small ports using small instruments resulting in less pain after operation, shorter recovery times, fewer complications and reduced hospital stay.
It is important to note that it is not the robot that is doing the operation. The robot instruments are under the control of the surgeon at all times and it is the surgeon who is doing the operation.

WHAT HAPPENS ON THE DAY OF THE OPERATION?

- As per the instructions given in Dr Vasudevan's rooms, you will present to the Day of surgical admissions unit (DOSA), in the hospital.
- Nurses in DOSA will start your admission process by taking a short history and doing routine observations.
- You will be given anti embolic stockings, known as TED stockings, and also Flowtron calf compressors to put on so as to minimise the risk of blood clots in your legs during surgery.
- The anaesthetist will review and discuss what the general anaesthetic involves with you. He will also discuss with you the options of post operative pain relief, if you require it post-op.

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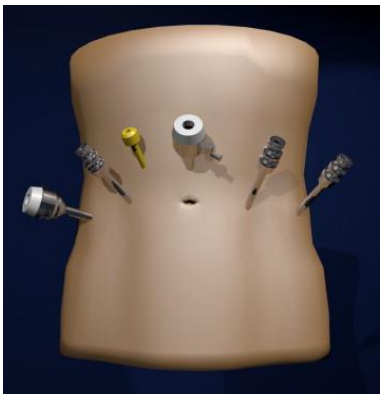
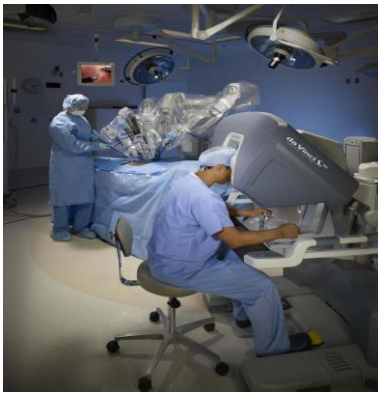
Details of the operation

- The anaesthetist will start by inserting an intravenous (IV) drip into your hand. He will use the IV drip to give you a general anaesthetic- so that you will be asleep for the whole procedure and will not feel anything once the general anaesthetic has been given.
- The anaesthetist will give you an injection of antibiotic at the commencement of surgery to minimise the risk of infection.
- The operating table you are lying on will be angled in a head downward direction to an angle of 20 degrees.
- 6 robotic ports are inserted into your abdomen via small incisions (as per the diagram below). CO2 gas is infused via the ports to distend your abdomen to allow the surgeon to do the operation.



- The robot is attached, also referred to as docking the robot, to the ports in your abdomen. The robot instruments are inserted via the ports. The primary surgeon who sits in a near by console does the operation to remove the prostate using the joy sticks and foot pedals in the console, as per picture below. There is also a secondary surgeon who stands next to the operating table and the robot, assisting the primary surgeon to do the operation.



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- Please note the prostate is removed whilst preserving the muscles that control your urinary continence. The nerves that are involved in erections may or may not be preserved as per the discussion with Dr Vasudevan during the pre-operative consultation.
- Once the prostate is removed the bladder is re-joined to your urethra using absorbable stiches. A catheter is placed to allow the join to heal.
- Once the operation is completed the robot is detached from the ports and stored away.
- The ports are removed and the small incisions are closed with absorbable stiches.
- The operation takes between 2 to 3 hours.

WHAT SHOULD I EXPECT AFTER MY SURGERY?

After the surgery is completed you will be taken to the recovery room where you will be closely observed until the anaesthetic wears off. You will be in the recovery room for about an hour or two. From there you will be taken to the ward.

You will wake up with:

- **A catheter.** This is a tube inserted into the bladder through your penis and is attached to a leg bag. This will collect your urine so you will not need to leave your bed to pass urine. The catheter will be left in place for 7 to 14 days to allow the join between your bladder and urethra to heal.
- **A drain.** This is a plastic tube that comes out from one of the small keyhole incisions. It prevents blood and urine collecting inside your wounds after surgery. It is normally removed the morning after surgery.
- **Dressings.** These small plasters cover the keyhole sites and are generally removed 48 hours after surgery.
- **A drip** to prevent dehydration. You will be able to start drinking clear fluids when you come around from the anaesthetic. The drip is usually removed the day after your surgery.

There may be some discomfort in the scrotum or penis, however most patients do not need strong pain relief after the operation. However, if you are in a lot of pain please inform the nursing staff.

The day after the surgery, the drain and drip will be removed. You will be mobilized from bed. You will be able to eat and drink as per normal.

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Most men will be discharged home in 1 to 2 days after surgery. Discharge will take place when:

- You can move around comfortably
- You are able to care for the catheter and leg bag yourself
- If you have any pain it is well controlled by oral tablets.
- You are given a date for catheter removal, which is normally in 7 to 14 days from operation.

Click here to view the video https://youtu.be/oL1zXvCuGnY

WHAT CAN I EXPECT WHEN I GET HOME?

Tiredness. Even though the wounds are small, you have had major surgery. So it is normal to have some tiredness for a few days.
Bladder spasms. Bladder spasms are contractions caused by the catheter rubbing against the trigone (muscle) inside of your bladder. This can result in urine passing down the sides of the catheter or give you the urge to pass urine, which can be uncomfortable. These spasms should reduce over time.
Bowels. It may take a few days for your bowels to open. Regular use of laxatives for a few days post-op will be useful to allow your stools to become soft, so that you do not have to strain to open your bowels. Also, regular mobilization at home will help to get your bowels moving again after surgery.
Take it easy. Do not lift anything heavy or do anything too energetic for example, shopping, mowing the lawn, lifting weights or running, for at least two to four weeks after your surgery. Doing these things may put too much strain on your stitches and could make your recovery take longer.
Shower. You can shower as per normal at home. The stiches are all absorbable and can be in contact with water. Pat yourself dry to minimise risk of infection.
Return to work. Allow 2 to 3 weeks before returning to work. If your occupation is very physical in nature you may require 4 to 5 weeks of rest prior to commencement of work.

REMOVAL OF CATHETER

Please come to the endoscopy section of the hospital on the date appointed by Dr Vasudevan's rooms for removal of your catheter.
A nurse will remove the catheter, which will take a few minutes to do. You will not require an anaesthetic for this.

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Once the catheter is removed, the nurses will monitor you for the next few hours to make sure you are able to pass urine and are not retaining it. They will contact Dr Vasudevan via phone and update him of the progress, prior to your discharge.
Most men will have some urinary incontinence after the catheter is removed. Start the pelvic floor exercises as soon as your catheter is removed and repeat them every day. Your continence should improve with time and persistence with the exercises. Most patients are pad-free three months after their surgery.
Some men may never regain full control of their continence, even 12 months after surgery, but this is very rare. If this happens to you, there are many ways to deal with this problem, which Dr Vasudevan will discuss with you.

WHEN CAN I RESUME SEXUAL ACTIVITY?

This will depend if a nerve sparing procedure was done or not at the time of your surgery. If a nerve sparing procedure was performed then, please take note of any erections or feelings you do have and report them on your follow-up appointments to Dr Vasudevan. It is normal in most men that they will lose some or all erectile function in the first few months after surgery while the nerves start to recover.
If a nerve-sparing procedure has been performed, Dr Vasudevan will start you on medication such as Viagra or Cialis when you return for your results 6 weeks after surgery. It is recommended that you take this as prescribed in order to help improve the blood flow into the penis for rehabilitation of your erections. It is not expected this to result in erections immediately and, in fact, some patients may take as long as 2 years to recover any natural erectile function. Additionally, vacuum devices may be used either alone or in conjunction with the above in order to maintain penile length.
You will also be seen by the penile rehabilitation nurse specialist in Dr Vasudevan's rooms as part of your post-operative follow-up who will assist and guide you in the rehabilitative process.

WHAT ARE THE RISKS OF ROBOTIC RADICAL PROSTATECTOMY?

All surgical procedures, no matter how minor or major, have possible risks and complications. While the following list of possible complications is recognised and over inclusive, most patients do not suffer them. All possible steps are taken to prevent complications from happening. The complications include:

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Common (greater than 1 in 10)

- Temporary difficulties with urinary control, which improves with pelvic floor exercises.
- Impairment of erections even if the nerves can be preserved (20 to 50% of men with good pre-operative sexual function)
- Inability to ejaculate or father children because the structures which produce seminal fluid have been removed (occurs in all patients).
- Discovery that cancer cells have already spread outside the prostate, needing further treatment, such as radiotherapy.
- Positive surgical margins -cancer cells seen (under a microscope) at the edge of the removed prostate tissue, meaning that it cannot be confirmed that all the cancer cells have been removed.
- Subcutaneous emphysema – is extravasation of CO2 gas outside the abdomen and under the skin. Even if it occurs, it is generally treated conservatively, as the gas dissipates by itself over several hours.

Occasional (between 1 in 10 and 1 in 50)

- Scarring at the bladder exit (bladder neck contracture) resulting in weakening of the urinary stream and needing further surgery (2 to 5%).
- Severe urinary incontinence (temporary or permanent) needing pads or further surgery (2 to 5%)
- Blood loss needing transfusion or repeat surgery.
- Further treatment at a later date, including radiotherapy or hormone treatment.
- Lymph fluid collection in the pelvis if lymph node sampling is performed.
- Some degree of mild constipation can occur. You will be given laxatives in the post-op period to relieve this but, if you have a history of haemorrhoids (piles), you will need to be especially careful to avoid constipation.
- Apparent shortening of the penis. This is addressed by using vacuum devices in the penile rehabilitation phase post-surgery.
- Development of a hernia related to the site of the port insertion.
- Development of a hernia in the groin area at least 6 months after the operation.
- Transient renal impairment post-operatively. Usually treated with IV fluids and close monitoring of renal function.

Rare (less than 1 in 50)

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

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- Conversion from Robotic procedure to an open procedure intra-operatively.
- Rectal injury needing a temporary colostomy (stool is diverted into a bag on your abdomen by bringing a loop of large intestine to the skin surface).
- Damage to structures inside the abdomen when the laparoscopic instruments are inserted. This is minimised by inserting the telescopic instrument first. This is then used to help insert the other instruments, so their placement is more controlled.

Very rare (less than 1 in 100)

- Death. Between 0.03% and 0.08% of patients die from complications of the operation.

POST-OPERATIVE FOLLOW-UP

Once you are discharged from hospital please contact Dr Vasudevan's rooms to arrange a follow-up appointment with Dr Vasudevan for about 6 weeks after your surgery.
Dr Vasudevan would have given you a PSA blood test form prior to your discharge from hospital. Please do this PSA blood test 3 days prior to your appointment with Dr Vasudevan. At the appointment Dr Vasudevan will discuss the pathology result of your prostate specimen, the PSA blood test result, review your wound and assess your continence and erectile function.
A subsequent follow-up appointment will be arranged.