Care of the Patient Undergoing Robotic-Assisted Prostatectomy

Danielle N. Starnes; Terran Warren Sims

Urol Nurs. 2006;26(2):129-136.

Abstract and Introduction

Abstract

Prostate cancer has many treatment options. In addition to open retropubic and perineal approaches to radical prostatectomy, laparoscopic robotic prostatectomy is available as a newer surgical option. Potential advantages of robotic surgery include reduced pain and trauma, less blood loss, reduced infection risk, shorter hospital stay, faster recovery, and less scarring (Intuitive Surgical, 2005). A variety of nursing care considerations involving pre-operative education and preparation, intra-operative and immediate postoperative care issues, and long-term follow up must be understood to meet the needs of a robotic surgical patient. Patient selection is very important to optimize a positive surgical outcome. Just as certain criteria make a good surgical candidate, there are factors that could complicate the surgery or adversely affect recovery.

Introduction

Prostate cancer is the second most common malignancy diagnosed in American men (National Cancer Institute [NCI], 2003). An estimated 232,090 new cases occurred in the United States in 2005 (American Cancer Society [ACS], 2005). Incidence rates are significantly higher in African-American men. More than 30,000 men died of prostate cancer last year, second only to lung cancer. Survival has improved dramatically over the past 20 years due to earlier diagnosis and improved treatment options. The 5-year survival rate for all stages of the disease has increased from 67% to 99% (ACS, 2005).

When prostate cancer is diagnosed following prostate biopsy, possible treatment options must be considered. Many factors should be considered when choosing the best treatment: patient age, overall health and life expectancy, co-morbidities, the grade and stage of the cancer, and an evaluation of the risks and benefits of each option (NCI, 2003). A comprehensive list of available treatment options can be found in . Laparoscopic robotic-assisted prostatectomy will be discussed in this article. Since there are often two or three reasonable alternatives for each patient, the decision can be difficult.

Table 1. Available Options for Treatment of Prostate Cancer

1. Surgery
    a. Open radical (retropubic or perineal) prostatectomy
    b. Traditional laparoscopic prostatectomy
    c. Laparoscopic robotic-assisted prostatectomy
2. Brachytherapy (radioactive seed implants)
3. External beam radiation (XRT)
4. Hormone therapy
5. Bilateral orchiectomy
6. Chemotherapy (with metastatic disease)
7. Cryotherapy

8. Combination therapy
9. Active surveillance ("watchful waiting")

Indications for Robotic-Assisted Prostatectomy

Many patients ask about robotic-assisted prostatectomy with the simple question: "Am I a candidate for robotic surgery?" Potential advantages of robotic surgery include reduced pain and trauma, less blood loss, less postoperative pain, reduced infection risk, shorter hospital stay, faster recovery, and less scarring (Intuitive Surgical, 2005). Appropriate evaluation of individual patients for robotic surgery requires consideration of a number of factors including Gleason score, stage of disease, prostate size, physical body size/body mass index (BMI), life expectancy, co-morbidities, and overall health (Menon et al., 2004). The ideal candidate for robotic prostatectomy is a younger man in good physical health with few co-morbidities, a small prostate, and a lower-grade, low-volume tumor. Generally, men with Gleason scores of 8, 9, or 10, and/or advanced stage T3-T4 disease would not be considered due to risk of cancer extension beyond the prostate.

Relative Contraindications

Factors that may complicate surgery include history of ruptured viscera/peritonitis, marked obesity/BMI >40, previous radiation therapy, previous hormone therapy, history of transurethral or suprapubic prostatectomy, large volume prostate, large median or lateral lobes, and a narrow pelvis (Menon et al., 2004). While one or more of these factors does not necessarily rule out robotic surgery, the decision ultimately rests with the surgeon. At this center, the upper weight limit is 250 pounds (BMI< 30), upper prostate size limit is 60 grams, and any form of prior pelvic radiation, external beam or seeds, is an absolute contraindication. These criteria are established for optimal patient and surgical outcomes, and helping patients understand the rationale is an important part of the pretreatment and pre-operative process.

Pre-Operative Considerations

A nurse practitioner or physician assistant conducts the pre-operative evaluation and work-up. While many patients who have been diagnosed with prostate cancer are anxious to "get it taken care of," a thoughtful and methodical approach to pre-operative assessment can lead to improved outcomes. A minimum of 6 weeks between prostate biopsy and surgery allows for inflammation of the prostate and surrounding tissues to resolve and facilitates the surgical procedure.

As with all surgery, both prescription and over-the-counter medications should be reviewed in case they need to be discontinued or adjusted before surgery. Patients should discontinue all aspirin, nonsteroidal anti-inflammatory medication, and platelet inhibitors 10 to 14 days before surgery to prevent excessive bleeding during and after surgery. Warfarin should be stopped 4 to 5 days prior to surgery unless the patient is at high risk for clot formation. In that case, intravenous heparin or subcutaneous enoxaparin would be administered as bridge therapy (Black, 2004). Vitamins and herbal supplements should be discussed since patients often neglect to mention over-the-counter products. Many supplements can increase bleeding and should be discontinued.

Diabetic patients should stop metformin 48 hours before surgery to decrease risk of lactic acidosis. Patients on insulin require individualized pre-operative treatment plans. Patients are asked to take blood pressure, cardiac, or anti-seizure medications on the morning of surgery with the exception of diuretics, which are usually held to prevent fluid and electrolyte loss.

Several days to weeks before the anticipated surgical date, patients are scheduled for a pre-operative evaluation and screening. A general history and physical are performed along with routine blood work including complete blood count, chemistry and liver profile, coagulation studies, and an electrocardiogram. If the patient's cardiac or pulmonary status is in question, a specialty referral and more detailed work-up is scheduled to obtain a surgical clearance.

Pre-operative teaching focuses on robotic surgery specifics. Much of the pre-operative visit is dedicated to patient and

family education about the procedure, the hospital stay, the discharge, and postoperative expectations. At the pre-operative visit, the surgical consent is reviewed with the patient and signed. Patients also sign a blood use consent authorizing a transfusion if needed during or after surgery.

The authors' facility currently requires a bowel preparation of clear liquids for 2 days along with Fleets Phospho-Soda® and bisacodyl tablets on the afternoon of day 1. The patient takes three doses of antibiotics the day before the procedure at 1300, 1400, and 2300. These antibiotics (such as erythromycin and neomycin) help to sterilize the colon in the event a perforation is inadvertently made in the rectum during the posterior dissection of the prostate. Some centers use 1-day preparation, which may be equally effective and easier for the patient to follow. (The patient education handout example that accompanies this article is from another center where 1-day preparation is used.) Antibiotics and other pre and postoperative instructions can vary from center to center.

An important aspect of pre-operative teaching is the use and care of the Foley or urinary catheter. A simple explanation of how the catheter decompresses the bladder and allows the surgical anastomoses to heal properly will help patients understand why a catheter may be needed for 1 to 3 weeks postoperatively. Many patients have never been hospitalized, and have no knowledge of catheters. Others who have been catheterized in the past are anxious because of a negative experience. Many are concerned that the catheter will be painful, that it will fall out, that they won't be able to care for it themselves, or that they will be homebound or incapacitated. Reassurance that catheter care is simple, that leg bags facilitate mobility, and bedside bags facilitate a good night's sleep can relieve much of the anxiety. An interactive approach to this teaching can be most beneficial for patients. By demonstrating catheter use, how the leg and bedside bags attach, and allowing patients to practice with technical features, many concerns can be alleviated.

Day of Surgery

Robotic prostatectomy patients are generally admitted to the hospital surgical suite the morning of surgery, where a peripheral intravenous line is started, thigh length thromboembolic stockings are put on, and the nurse anesthetist or anesthesiologist administer a light sedative. The patient is then transported to the operating room.

Patients undergoing robotic prostatectomy receive antibiotic prophylaxis 15 to 60 minutes prior to the incision. Endocarditis prophylaxis is needed, and additional antibiotics may be given pre-operatively. At the authors' center, anesthesiology administers 5,000 units of subcutaneous heparin at the beginning of the procedure as deep vein thrombosis prophylaxis. The patient is prepped and shaved, sequential compression devices are applied to the legs, and he is placed in the lithotomy position. Arms are tucked securely at the sides, and the patient is secured to the table with padding and tape to ensure little to no movement when placed in extreme Trendelenburg position for the majority of the procedure. Anesthesia places a second intravenous line and an orogastric tube to decompress the stomach. An arterial line is used if the patient has a prior cardiac or pulmonary history requiring more precise monitoring. The eyes are secured closed with tape to prevent spontaneous opening and/ or corneal abrasions. Intra venous fluids are restricted to 600 to 800 ml if possible, until the anastomosis is performed, preventing excessive production of urine which can make visualization difficult (Menon et al., 2004). The Foley catheter is placed on the sterile field prior to the incision being made. The authors' institution uses two assistants, a scrub nurse or technician, and a circulating nurse for the procedure.

Robotic-Assisted Prostatectomy

When all preparations are completed, the operation is ready to begin. The operative suite is readied (see Figure 1). Robotic and assistant ports are placed by the surgeon and/or assistants, using one camera port, two robotic ports, and three assistant ports for the standard robotic prostatectomy. General placement of the port sites and relation to anatomy are depicted in Figures 2a and 2b. Following placement, adhesions are lysed if necessary, and the robot is docked to the patient at the foot of the bed, allowing the surgeon to proceed with removal of the prostate. The surgeon is seated at the console, and two assistants are seated at the bedside to assist with retraction and changing the robotic instruments.

Figure 1.

Operative suite set up for robotic surgery university of virginia.

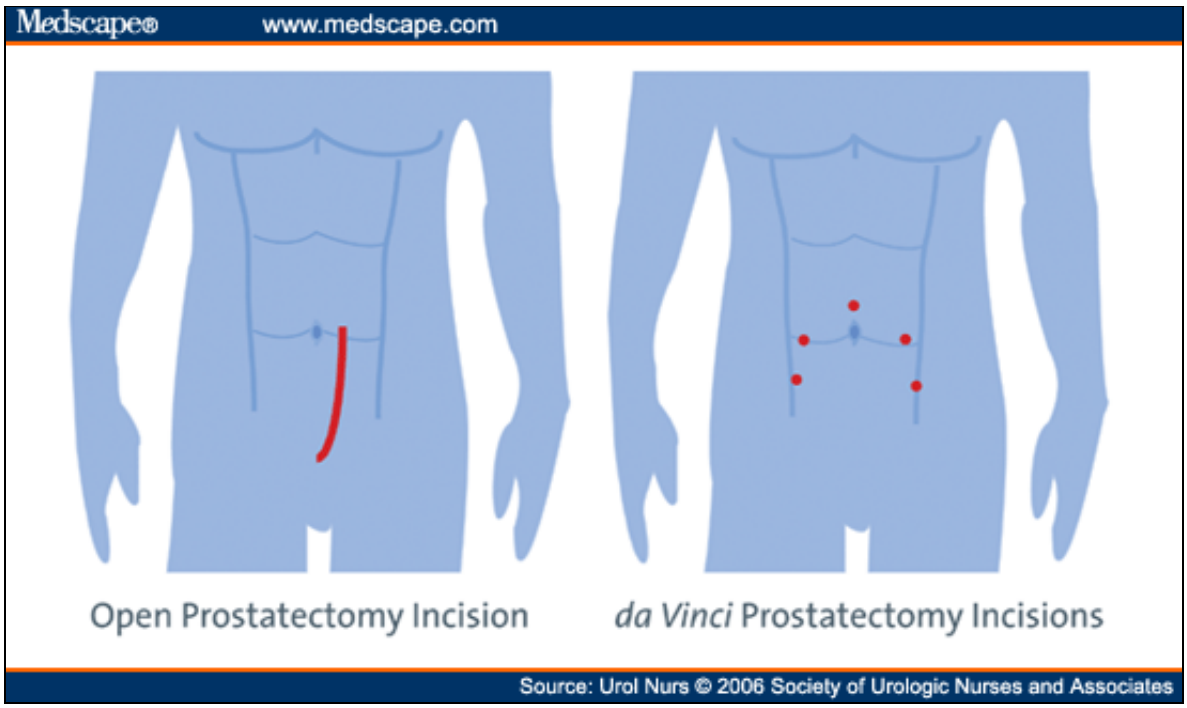

Figure 2a.

Robotic port placement.

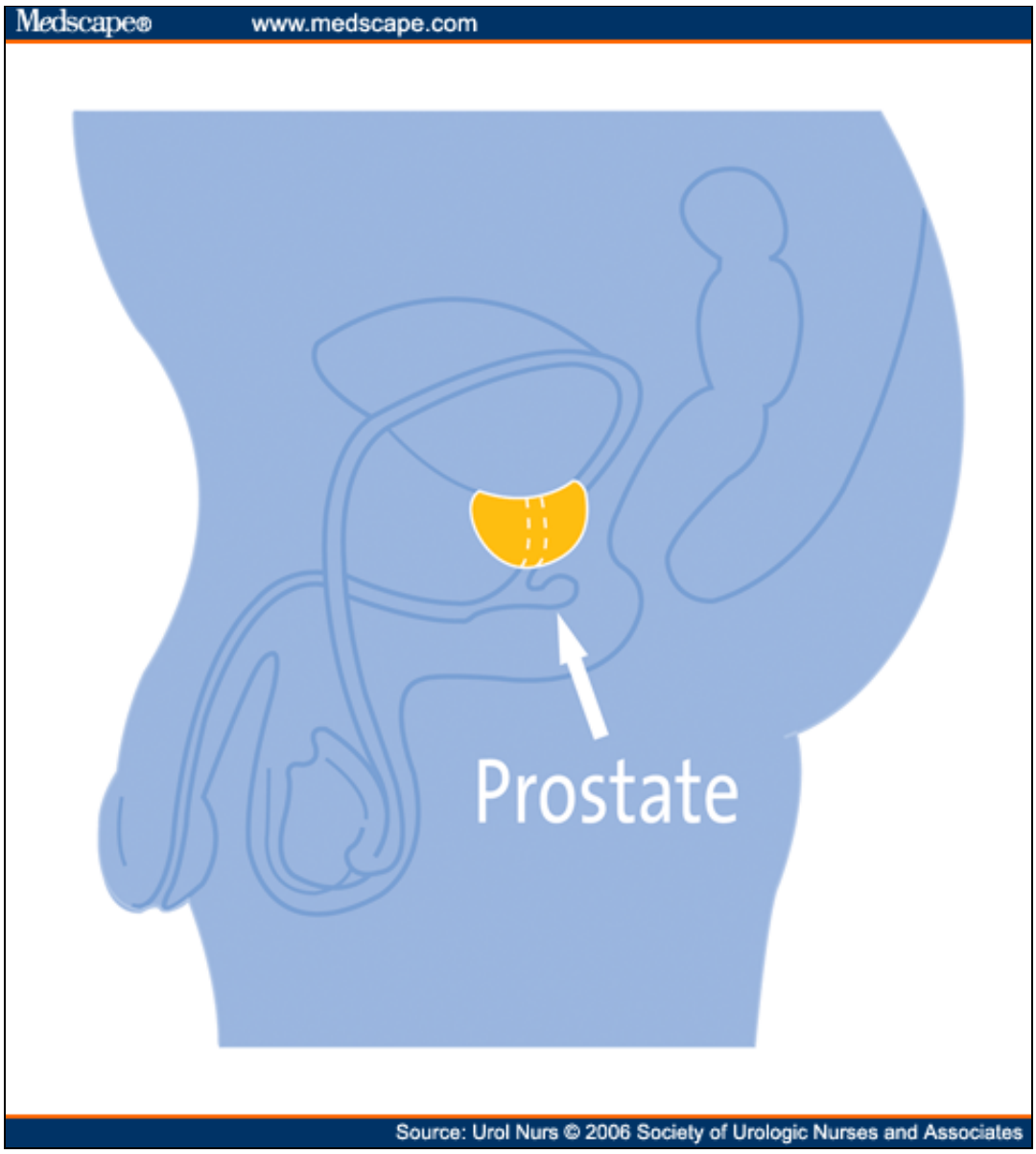

Figure 2b.

Anatomical location of prostate.

There are two possible approaches to the robotic prostatectomy surgery. The main difference is the point at which the seminal vesicles and vas deferens are dissected out. In the fist approach, which is an adaptation of the approach developed for laparoscopic non-robotic prostatectomy, the surgeon begins the operation posteriorly by dissecting out the seminal vesicles and vas deferens away from the rectum through an incision in the cul de sac. The surgeon then moves anteriorly and drops the bladder by transecting the medial and median umbilical ligaments. The endopelvic fascia is entered, and the prostatic apex, urethra, and dorsal venous complex are all exposed. A suture is placed in the dorsal venous plexus to control bleeding, and a traction suture is placed in the prostate to be used at a later time. After identification of the prostatovesical junction, the bladder neck is divided. The Foley catheter is placed on traction after being exposed to help in the transection of the remaining posterior bladder neck.

In the second approach, the dissection of the seminal vesicles and vas is done after the prostatovesical junction has been divided. In both approaches the prostate is then separated off of the rectum and the surgeon then dissects the lateral pedicles off the prostate, which exposes the neurovascular bundles. Now the surgeon must decide whether to spare both, one, or neither of the nerve bundles, which are necessary for erectile function. The grade and stage of the disease guide the surgeon's decision. The urethra can now be transected, and the prostate is placed in a bag within the abdomen for removal at the end of the procedure. The anastomosis between the bladder neck and urethra is achieved using a running suture over a new 18 French catheter. The bladder is then filled with saline to test the

integrity of the anastomosis, observing for any leakage. If no leakage is seen, and hemostasis has been achieved, the Jackson-Pratt (JP) drain can be placed through one of the port sites. The prostate is then removed through the umbilical incision and all ports are closed with dissolvable suture and covered with steri-strips and a suitable dressing. The Foley catheter is then attached to straight drainage and secured to the leg (personal communication, D. Theodorescu, May 2005).

Immediate Postoperative Care

Immediately after the completion of surgery, the patient is moved to the recovery room. In most cases, patients are extubated before leaving the operating room. Routine nursing care is provided in recovery, with attention focused on stability of vital signs, pain control, catheter output, and abdominal drain output.

For immediate postoperative pain, morphine, 2 to 4 mg intravenously every 1 to 2 hours can be given. Ketorolac (Toradol®) is also used if renal function is adequate (creatinine 1.2 or less). Patient-controlled analgesia or pain pumps are not usually needed since postoperative pain is much less acute and of shorter duration than with open prostatectomy. A common complaint postoperatively is not of actual pain, but of a gaseous, distended feeling in the abdomen (due to carbon dioxide used during the procedure that has not yet dissolved into the tissues). Patients also may experience bladder spasms following surgery. These can be treated with belladonna and opiate (B&O) suppositories every 8 hours as needed during hospitalization. Oral antispasmodics (oxybutynin or tolterodine) can also be used once patients are tolerating diet and fluid intake without difficulty.

JP drain output is recorded hourly in the immediate postoperative period. Increase in output of the JP drain might suggest a potential urine leak, a lymph leak (if a lymph node dissection was performed), or pelvic bleeding. An important difference between the robotic surgical patients and traditional open prostatectomy patients is the JP drainage on the first postoperative day. Patients who underwent robotic-assisted surgery will generally have higher JP output immediately after surgery, most of which is irrigation solution that was not removed during the procedure.

Operative and Postoperative Complications

As with any surgical procedure, there are potential complications to watch for when caring for the robotic-assisted surgical patient. The most obvious is the general operative risk associated with anesthesia. Many patients are otherwise healthy males, with no prior medical or surgical history, so it is impossible to predict exactly how they might respond to the anesthetic agents or pain medications. Patients with co-morbidities like heart disease, obesity, chronic obstructive pulmonary disease, diabetes, and hypertension are more likely to have postoperative problems.

Following abdominal surgery, development of a bowel ileus is always possible, so listening for bowel sounds is important in the early postoperative period. If no bowel sounds are noted, the patient is restricted to ice chips only. If bowel sounds are present, clear liquids may be started the evening of surgery, with transition to soft foods by the next morning, followed by a regular diet as tolerated.

Other potential postoperative complications include incisional infection, urinary tract infection, or urinary leak from the anastomosis site. Leaks are often detected when high-volume JP output is recorded over a short period of time. If this occurs, the urinary catheter can be placed on traction (by the surgeon or a trained member of the surgical team) and the leak will heal. If a urine leak is suspected, a creatinine level can be performed by the laboratory on the drainage fluid for a definitive diagnosis. Additionally, a cystogram could be done to visualize the location and extent of the anastomotic leak.

As the number of operative cases that a center performs increases, so does the potential for a range of complications. Centers with well over 100 robotic-assisted patients have reported a range of problems that include bowel injuries, ureteric injury, bladder injury, urine extravasation with leak, urinoma formation, intra-abdominal hemorrhage, lymphorrhea, phlebitis, and port site hernias (Basillote, Ahlering, Skarecky, Lee, & Clayman, 2004). It is important to remember that these are not common occurrences, but rather potential problems.

Discharge from Hospital

The majority of robotic-assisted surgery patients are released from the hospital on the first or second postoperative day. The patient should be walking independently and performing basic activities of daily living such as toileting and bathing. Before discharge, the JP drain and remaining incisional bandages are removed.

A prescription for oral narcotic pain medication is given to help with pain control at home. Many patients stop taking the pain medication after a couple days and find that they get adequate relief from acetaminophen. Some may use the narcotic for bedtime use with acetaminophen during the day. Patients are not routinely sent home on antibiotics.

The patient and his family receive additional education about postoperative home care and urinary catheter care. Patients are sent home with the catheter secured to the leg with waterproof tape to prevent pulling or slipping. Patients are given both a large bedside drainage bag and a leg bag.

General postoperative instructions involve no heavy lifting (10 pounds or more), no strenuous exercise, and no sexual activity for 6 weeks. Showering is permitted 48 hours after surgery. Patients should not drive or operate heavy equipment while taking narcotic pain medication.

It is imperative to emphasize with discharge teaching possible problems that may arise at home. Patients who have been exposed more than once to anticipated events and care needs will experience less anxiety at discharge and have better outcomes with self-care at home. This can also reduce the number of frantic calls to physicians and the clinic. Teaching should reflect re-exposure to home care concepts taught in the pre-operative teaching session. Many centers give patients a surgical teaching booklet at the first teaching session and ask them to bring it to the hospital for review at discharge. A place for key phone numbers and a question list is helpful.

Possible Problems

Hematuria is common and may persist for several weeks. A blood clot or mucous plug can occlude catheter drainage completely. This can be easily remedied by irrigating the catheter. Patients are not routinely taught catheter irrigation, but are instructed that if the catheter stops draining freely, they should either come to the clinic or see a local urologist or the emergency department immediately for further evaluation. If the catheter needs to be changed for any reason in the immediate postoperative period, ideally the surgeon should change the catheter to prevent damage to the anastomotic site.

Some drainage from around the catheter is completely normal, but bothersome. Good hygiene and skin care should be discussed with use of moisture barrier cream for the penile meatus recommended if excoriation is a problem. Some centers suggest use of antibiotic ointment for this problem.

Constipation can be a difficult problem following surgery. General anesthesia and narcotic pain medication slow bowel function. A prescription for narcotic pain medications is given to help with pain control at home. Patients are given a stool softener to take until normal bowel movements return and until narcotic pain medication is no longer needed. Increased fiber and fluid intake are also encouraged.

Return to Work

Timing for return to work depends on the individual patient's recovery course and the type of work involved. Patients may usually return to work after the catheter has been removed. Some men may return as early as 2 weeks, but if the job requires heavy lifting, the full 6 weeks will be needed for recovery. If urinary incontinence is an issue for the workplace, patients should take the entire 6 weeks off to develop a pattern for bathroom visits and allow time for improvement in control before returning to work.

Postoperative Followup

The first postoperative clinic visit is scheduled for 1 to 3 weeks after surgery depending on surgeon preference. There are published studies documenting that catheter removal before a period of 4 to 7 days increases the risk of urinary retention postoperatively, following both laparoscopic and open radical prostatectomy (Hoznek, Menard, Salomon, & Abbou, 2005). If extensive bladder neck reconstruction was required in surgery, then the 3-week time period is more

appropriate. The patient is seen in clinic for a low pressure cystogram, which can detect bladder neck anastomotic leaks. The catheter can be removed if there is no evidence of a leak at the anastomosis. If a leak is detected, the catheter must remain in place for another 1 to 2 weeks. The cystogram is then repeated; if the anastomosis is intact, the catheter is removed and the patient is given a voiding trial to make certain he can urinate on his own. When the catheter is removed the patient is usually incontinent, which can be surprising and discouraging unless he has been prepared in advance. Both pre-operatively and postoperatively, time is spent talking with the patient about urinary symptoms and realistic expectations of continence. Other long-term issues patients may encounter after a prostatectomy are also discussed including erectile dysfunction, possible urethral stricture, and possible cancer recurrence. An important point to remember is that while the long-term side effects are the same, no matter which surgical approach is taken, the length of time and severity of those side effects often differs.

Incontinence is probably the side effect which causes the most concern in prostatectomy patients. The rates of long-term incontinence in robotic surgery have not been established, but one can extrapolate that they may be similar to other prostatectomy surgery with about a 1% to 3% risk. The most important information for the patient is that incontinence will improve. Pads or a protective undergarment may be needed for a few weeks to a few months. Kegel exercises (at least 20 sets of 10 daily) should be practiced daily as soon as the catheter is removed to help facilitate return of sphincter control. Timed voiding is another useful tool in the postoperative period. Protection of skin from urine excoriation should be discussed. Moisture barrier cream is effective for the perineal skin if irritated from urine exposure. Patients will usually experience return of continence progressively in anywhere from a few weeks to several months. Symptoms of urgency and stress incontinence will take longer to improve. Statistics show that return of continence is quicker with robotic than with open prostatectomy. In a study published by Menon and his team at Henry Ford Hospital in 2004, 96% of patients were dry 6 months after surgery, with a median time of continence return being approximately 42 days (Menon et al., 2004).

After the return of continence, patient focus generally shifts to erectile function and the issue of when their sex life can return to "normal." Several things affect when, how, and if erectile function will return, but it can take anywhere from several weeks to more than a year to return. Factors to consider are patient age, sexual function prior to the procedure, and whether one or both neurovascular bundles were spared during surgery (Basillote et al., 2004). Many centers are starting all nerve-sparing prostatectomy patients on PDE5 inhibitors (such as sildenafil or tadalafil) unless medically contraindicated. They are given a low dose for daily use at 6 weeks after surgery to aid in return of function. The use of a validated questionnaire, such as the SHIM, to assess return of sexual function can be effective in identifying areas of concern and establishing a database of patient results. Patients are often more comfortable responding to survey questions which can facilitate discussion about postoperative erectile function.

Another potential longer-term postoperative complication is the formation of a urethral stricture at the anastomotic site. Patients will often complain of a progressively worsening weak urine stream that may onset weeks to months after surgery. Cystoscopy is performed in the office to evaluate the anastomotic site and dilate the stricture if necessary. Again, if a patient requires urinary catheter placement postoperatively, it should be done by a urologist, preferably the originating surgeon, to protect the anastomoses.

Expectations and Long-Term Followup

Patients are asked to return for an evaluation 6 weeks after robotic-assisted prostatectomy surgery to evaluate continence, erectile function, and overall return to normal activities. PSA values are checked at 3 to 6 month intervals after surgery and should be within the range of <0.06 ng/ml or undetectable. If the PSA values ever rise to a detectable level, additional treatment may be needed. If the value rises, the PSA should be repeated at least once in 2 to 4 weeks to make certain the initial reading was accurate. Final pathology may also play a role in any discussion of postoperative adjuvant treatment such as hormone therapy or external beam radiation.

The Future of Robotics

New technology such as the da Vinci® Surgical System is the future of surgical medicine. The minimally invasive nature of these procedures provides benefits for the patient, the surgeon, and the hospital. Radical prostatectomy is only one of many procedures currently being performed with the da Vinci. There are other urology applications such as

bladder and kidney procedures, as well as cardiac and general surgery procedures. Any hospital can have a robotic surgery program, but the key to a successful program is a dedicated team of surgeons, nurses, and assistants committed to making the program a total success (Steers, LeBeau, Cardella, & Fulmer, 2004).

CE Information

The print version of this article was originally certified for CE credit. For accreditation details, please contact Urologic Nursing, East Holly Ave Box 56, Pitman, NJ 08071, Email: uronsg@ajj.com

Sidebar: Patient Information Handout

Robotic Laparoscopic Prostatectomy

You have chosen surgery as the treatment for your prostate cancer. The primary purpose of a prostatectomy is to cure the cancer by removing it completely. Today, you have an appointment to be evaluated by pre-operative screening. The pre-operative evaluation consists of a physical exam, blood tests, urine sample, chest x-ray, electrocardiogram, and other tests as needed. You will also meet with an anesthesiologist who will review your medications and answer your questions about the anesthesia you will receive.

It is recommended you start doing Kegel exercises before surgery. You will receive a copy of instructions today.

The Day Before Surgery

- You may eat a light breakfast (no later than 11 am).
- From 11:00 am to 12:00 midnight you can have clear liquids. (Clear liquids are water, apple juice, Jell-O, tea, coffee, any soda.) Milk, coffee creamer, dairy products, orange juice, grapefruit juice, any juice with pulp, and combination juices are NOT clear liquids.
- Drink a bottle of magnesium citrate (10 ounces) between 11:00 am and 12:00 pm.
- You will be given a prescription for an antibiotic, Neomycin and Flagyl. Take a does at 2 pm, 4 pm, and 6 pm.
- Do NOT eat or drink after midnight.
- The anesthesiologist in pre-operative screening will review any medications you may or may not take the day of surgery with you.

After Your Surgery

- After your surgery you will spend 1 to 2 days in the hospital. Most patients usually leave the hospital the next day.
- You will have 6 small incisions on your abdomen. It is not uncommon to have bruising around these sites. This will resolve itself over time.
- You may have scrotal/penile swelling and bruising. This is not abnormal. It should resolve in about 7 to 10 days. You can also elevate your scrotum with a small towel or washcloth when you are sitting or lying down.

- A urinary catheter will be placed in your bladder during surgery. The catheter will allow the bladder and urethra to heal. A large bag (for night use) and a small bag (for day use) with instructions for changing them will be provided for you.

- Gently wash the area around the catheter daily. If it becomes irritated because of the catheter, you may apply an antibiotic ointment to the area after washing. Never pull on the catheter. Keep the drainage bag tubing free of kinks and loops. Always keep the collection bag below the level of the bladder.

- It is not uncommon with the catheter in to have bladder spasms. Leaking around the catheter is usually from a spasm. You will be given a prescription for bladder medication (Ditropan or Detrol) to be taken once a day. You will continue this medication for 3 to 4 weeks after the catheter has been removed.

- The catheter will be in for 7 to 10 days. You will be given an appointment for catheter removal.

- Kegel exercises should be resumed after the catheter is removed. These exercises help to regain your continence and should be done on a regular basis. Most men have difficulty with urinary control after surgery and require some form of protection (Depends, Attends pads). Jockey underwear usually works to hold pads in place. Most men are able to regain reasonable control in 1 to 6 months.

- Recovery of potency (erection) after your surgery can be slow and time dependent. Even though the nerves are spared there can be some injury from trauma or stretching from the operation. These nerves need time to heal. At your followup visits options will be discussed with you. Today, you will receive information on the three drugs available, including the most common questions that are asked.

- Diet - You will be started on a clear liquid diet when bowel sounds are heard in your abdomen. If a liquid diet is tolerated you will be advanced to your regular diet. Eating foods high in protein and vitamin C promote wound healing. A well-balanced diet promotes good health and aids in your recovery. Avoid a diet high in salt, fat, convenience foods, and fast foods.

- Drink 8 to 10 glasses of fluid every day while you have the catheter and after it is removed. If you notice blood in your urine, increase your fluid intake.

- Bowels - On discharge you will be given instructions to take a stool softener - Colace (no prescription is needed). Abdominal distention, constipation, or bloating is to be avoided. Eating a well-balanced diet including foods high in fiber, fruits, vegetables, and whole grains will help avoid these problems. If you are unable to have a bowel movement, you may take Milk of Magnesia as directed. Do not use suppositories, enemas, or rectal temperatures. It is not uncommon to have some blood in your urine after a bowel movement.

- Activity - You may walk around and climb stairs as tolerated. You may take a shower. Absolutely no biking, motorcycling, horseback riding, or other similar activities for 4 weeks. Avoid heavy lifting, pushing, pulling (more than 5 lbs) and vigorous exercise (calisthenics, tennis, running, golf) for 4 weeks. Do not drive while taking pain medication or with the catheter in.

- Pain - You will be given a prescription for pain medication. Perineal discomfort (between your rectum and scrotum) is not uncommon. In the hospital you will be given a foam horseshoe cushion to sit on to decrease

pressure.

Problems to Report

- Fever over 101 degrees F
- Chills
- Severe pain not relieved by your pain medication
- Heavy bleeding or clots in your urine
- Decrease in urine output or no urine output
- Redness or separation of any incision site

Joan Guilianelli, MLPN, CUA
Durham, NC

References

1. American Cancer Society. (2005). Cancer facts and figures 2005. Retrieved April 14, 2005, from www.cancer.org
2. Basillote, J.B., Ahlering, T.E., Skarecky, D.W., Lee, D.I., & Clayman, R.V. (2004). Laparoscopic radical prostatectomy: Review and assessment of an emerging technique. Surgical Endoscopy, 18(12), 1697-1711.
3. Black, J.M. (2004). Anticoagulation in elective surgery. Plastic Surgical Nursing, 24(1), 8-13.
4. Hoznek, A., Menard, Y., Salomon, L., & Abbou, C.C. (2005). Update on laparoscopic and robotic radical prostatectomy. Current Opinions in Urology, 15(3), 173-180.
5. Intuitive Surgical. (2005). Development of robotic surgery. Retrieved May 23, 2005, from www.intuitivesurgical.com
6. Menon, M., Tewari, A., Peabody, J.O., Shrivastava, A., Kaul, S., Bhandari, A., et al. (2004). Vattikuti Institute prostatectomy, a technique of robotic radical prostatectomy for management of localized carcinoma of the prostate: Experience of over 1,100 cases. Urology Clinics of North America, 31(4), 701-717.
7. National Cancer Institute. (2003). What you need to know about prostate cancer. Retrieved April 14, 2005, from cis.nci.nih.gov
8. Steers, W.D., LeBeau, S., Cardella, J., & Fulmer B. (2004). Establishing a robotics program. Urology Clinics of North America, 31(4), 773-780.

Acknowledgments

The authors wish to thank Dan Theodorescu, MD, PhD, FRCS(C), FACS, Paul Mellon Professor of Urology and Molecular Physiology, Director, Paul Mellon Prostate Institute, University of Virginia for his help and guidance through the preparation of this manuscript.

Urol Nurs. 2006;26(2):129-136.