Radical Prostatectomy: What You Need to Know

Dawn Camp-Sorrell, MSN, FNP, AOCN®

One of the most important issues in men’s health today is prostate cancer. It is the most common male cancer and the second-leading cause of death among American men (American Cancer Society, 2005). Treatment options for prostate cancer vary depending on the stage at diagnosis, grade of tumor, and patient’s age and functional status. One option for localized and well-differentiated tumors is radical prostatectomy (see Figure 1) with the goal of curing the disease while maintaining a man’s quality of life (Shah, Robbins, Melamed, & Lepor, 2003). If prostate cancer is discovered and treated early, the overall survival rate is high.

Radical prostatectomy is the complete removal of the prostate gland, seminal vesicles, and prostatic capsule followed by surgical repair of the bladder and remaining urethra. The surgery can be performed with a retropubic or perineal approach and includes a sampling of the retroperitoneal lymph nodes for pathology. Patients may not be aware of the details surrounding the surgery without education from healthcare providers; therefore, the purpose of this article is to provide an educational tool, written at a basic reading level, for distribution to patients undergoing radical prostatectomy.

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Author Contact: Dawn Camp-Sorrell, MSN, FNP, AOCN®, can be reached at onpdawn@aol.com, with copy to editor at CJONeditor@jsobel.com.

References


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References

Prostate Gland

The prostate is a male sex gland located below the bladder and in front of the rectum (see Figure 1). Male hormones such as testosterone are required for the prostate to function. The prostate has right and left lobes (apex and base) and surrounds the urethra, the tube that carries urine from the bladder out through the penis. As a tumor develops, it may squeeze the urethra, resulting in difficulty in passing urine.

Radical Prostatectomy

During this surgery, under general anesthesia, the prostate gland, seminal vesicles, and vas deferens will be removed. A radical retropubic prostatectomy involves a surgical cut in the lower abdomen to remove the prostate. A radical perineal prostatectomy involves a surgical cut in the perineum, which is the area between the scrotum and anus. Both procedures take two to four hours.

After removal of the prostate, the urethra is sewn to the bladder. A urinary catheter is placed to allow urine to drain. The bladder neck is reconnected to the urethra, and some lymph nodes are removed to examine for cancer. Drains are placed around the site to remove unneeded fluid, and the incision is closed with sutures or staples.

During surgery, care is taken not to damage the urethral sphincter. The sphincter is a band-like structure that is necessary for urine control. Preserving erectile function also remains a challenge with radical prostatectomy. The nerves responsible for an erection are located outside the prostate gland. When cancer is confined to the prostate gland, efforts are made to preserve these nerves when the gland is removed. If a risk exists of leaving some cancer behind (positive surgical margins), the nerves may have to be removed, leaving the patient impotent.

After the prostate is removed, it is sent for pathologic evaluation, when the margins, or edges, of the prostate are examined. Margins of the prostate without cancer cells are reported as negative, whereas those with cancer cells are reported as positive. If the margins are positive, cancer may remain in the body and other treatments such as radiation or hormonal therapy may be needed. Hospital stays are usually 48–72 hours, and drains are removed prior to going home. Full recovery can take as long as 20 weeks.

Foley Catheter

An indwelling catheter that leads from the bladder to the outside of the body drains urine and allows the bladder neck to heal. The catheter will remain in place for approximately 14–28 days. The catheter has an inflatable balloon that is placed in the bladder to ensure that the catheter remains in place. Once inserted, the catheter must be secured to the upper leg to avoid potential injury from tugging on the tubing. Should the rubber band used to secure the catheter cause skin irritation, a Velcro® band can be substituted (e.g., Dale Foley Catheter Holder, Dale Medical Products Inc., Plainville, MA).

The urine drainage bag should be emptied at least every eight hours or more frequently as needed. Catheter care is important to prevent infection. Ask your doctor or nurse what type of cleaning agent to use. Clean the perineum, catheter, and urinary meatus (opening) with soap and water twice a day. You should drink at least six to eight large (8 ounces) glasses of fluid a day. This will help to flush the bladder of germs. Be sure to keep the drainage bag below the level of the bladder; otherwise, urine can back up into the bladder and cause a bladder infection. During the day, a leg drainage bag can be used. A leg bag is smaller than the urine drainage bag and must be emptied more frequently.

Small blood clots in the urine are common as many as six days after surgery. If you notice large clots or clots that clog the tube, call your physician. Blood-tinged urine can persist for four to eight weeks after surgery. Once the catheter is removed, patients commonly have burning with urination. Continue to drink plenty of fluids to decrease this discomfort. If the burning continues 48 hours after the removal of the catheter, call your physician. If you have a temperature higher than 100.5°F, call your physician.

Incision Care

You must keep the incision site clean. Ask your doctor and nurse what type of cleaning agent to use. Soap and water in the shower often is recommended, followed by patting the area dry. If you notice that the incision is red, warm, or draining, call your physician. If you have a temperature higher than 100.5°F, call your physician.

Bladder Spasms

Spasms can occur in the bladder. Spasms are the involuntary tightening of the muscle in the bladder and may cause pain or discomfort. They may be caused by catheter kinking or bladder distention or may result from the catheter itself. Antispasmodic medications can be prescribed to prevent or decrease the discomfort from the spasms. You must take these medications as ordered by your physician.

Incision Pain

You will experience pain at the incision site for several days. You must take your pain medications as prescribed by your physician.

Figure 1. Prostate and Nearby Organs

Note. Image courtesy of the National Cancer Institute.
physician. For the first four to five days, you may need to take the pain medications frequently. By controlling the pain, you will be able to perform activities necessary to get well.

**Constipation**
For the first few days after surgery, you must take a stool softener. Pain medications and anesthesia can cause the bowels to slow down. If you do not have a bowel movement in three days, call your physician.

**Urinary Incontinence**
Once the catheter is removed, you may have incontinence, which is the involuntary loss of urine. The loss of urine you may experience may be continuous or a slight trickle. An incontinence pad can be worn to absorb the leakage. Urine leakage usually resolves in 3–12 months. Reducing the amount of fluid consumed after dinner may control problems with incontinence at night. Frequent emptying of the bladder may be helpful. Be sure to keep the urinary meatus (opening) clean to prevent infection. Medications can be prescribed to help with incontinence. Sitting to void also may be helpful.

Stress incontinence is the leakage of urine with pressure. Urine leakage occurs when you sneeze, cough, strain, or lift a heavy object. This type of incontinence is common following radical prostatectomy. Kegel exercises can be performed to strengthen the pelvic floor muscles and decrease urine leakage.

**Kegel Exercises**
Kegel exercises are performed to help strengthen muscles that support the bladder. These muscles are used to stop the flow of urine. To perform Kegel exercises while standing or sitting, tighten the pelvic floor muscles as hard as you can. Hold for five seconds, then release. Initially repeat five times a day. This exercise can be done many times throughout the day. On your back, place a pillow under your knees. With your ankles crossed, squeeze your buttocks together and draw in the anus as if to prevent a bowel movement. Keep your knees pressed firmly together. Hold for five seconds and then relax. Repeat initially at least five times. These exercises will help to strengthen the muscles and help to control urine leakage. You may have to continue to do these exercises to maintain control.

**Erectile Function**
Erectile dysfunction is the inability to achieve or maintain a firm erection, and it may take some time before erectile function returns. The nerves that stimulate erection must be intact after surgery to achieve erection. Medications may be helpful in achieving an erection, and your physician can give you information on their use.

**Follow-Up Care**
You will be scheduled to see your surgeon approximately two to three weeks after surgery. At this time, the catheter will be removed as well as your sutures or staples. You will have prostate-specific antigen (PSA) levels measured frequently throughout the first year. The PSA is the best way to make sure that the cancer hasn’t come back after surgery. Most men can return to their normal lifestyles approximately four to six weeks after surgery.

**For More Information**
- American Prostate Society (www.ameripros.org)
- Cancer Care, Inc. (www.cancercare.org)
- Dale Medical Products, Inc. (www.dalemed.com)
- Erectile Dysfunction Institute (www.erectile-dysfunction-impotence.org)
- National Association for Continence (www.nafc.org)
- National Cancer Institute (http://cancer.gov/cancerinfo/wyntk/prostate)
- Prostate Cancer Institute (www.prostate-cancer-institute.org)
- Prostate Cancer Foundation (www.capcure.org)
- Prostate Health Council (www.afud.org)
- Prostate Cancer Research and Education Foundation (www.prostatecancer.com)
- Us Too! International Inc. (www.ustoo.org)

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