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The Level: 300

1. The different disorders of the prostate gland.
2. Aetiology.
3. The therapeutic interventions as well as surgeries.
4. The nursing care and client teaching in the different conditions.

Their Answer

1. There are three most common form of prostate disorders. Which are

- a. Prostatitis (inflammation of the prostate): It is the inflammation of the prostate that can affect men of any age. It is common in younger men, age between 30 years and 50 years. There are two main types of prostatitis.

1. Bacteria prostatitis- acute or chronic bacterial infection.
2. Non-bacterial prostatitis- inflamed prostate also known as chronic pelvic pain syndrome(CPPS)

In most cases, the cause of prostatitis is unknown. Bacterial prostatitis responds well to antibiotic drugs that can get into the prostate.

Non bacteria prostatitis is the most common form of prostatitis and is more difficult to manage. Symptoms varies from one man to another.

- b. Non-cancerous enlargement of the prostate (benign prostatic hyperplasia): It is more common as men get older. It is not life threatening but can significantly affect the individuals life.

The enlargement of the prostate gland causes the urethra to narrow, and put pressure on the base of the bladder which can lead to obstruction in the flow of urine.

- c. Prostate cancer: It affects men over the age of 50 years. The cause remains unknown, although advancing age and family history are known as contributing factor.

In the early stage, the cancer cell is confined to the prostate gland. The more aggressive types of prostate cancer, cancer cells enter the vascular and lymphatic system early and spread to other part of the body where they develop secondary tumors.

2. a. Prostatitis

It can be caused by bacteria that enter the prostate gland from the urinary tract and from direct extension or lymphatic spread from the rectum.

- b. Benign prostatic hyperplasia

The prostate gland is located beneath the bladder. The urethra passes through the center of the prostate. When the prostate enlarges, it begins to block the urine flow. Most men have continued prostate growth

throughout life. In most men; this continued growth enlarges the prostate enough to cause urinary symptoms or to significantly block urine flow. It isn't clear what causes the prostate to enlarge. However, it might be due to changes in the balance of sex hormones as men grow older.

c. Prostate

It not clear what causes prostate cancer?

Doctors know that when some cell in the prostate becomes abnormal, DNA causes the cell to grow and divide more rapidly than normal cells do. The abnormal cells continue living when normal cell dies. The accumulating abnormal cells form a tumor that can grow to invade nearby tissue. Some abnormal cell can also break off and metastasize to other part of the body.

3. A. Prostatitis

1. Medicine

a. Antibiotics: if a bacterial infection is causing you to have severe symptoms, antibiotics are usually prescribed either through iv or orally.

b. Alpha blockers: These drugs help relax part of the urinary tract. Taking them can make urinating less painful.

c. Non-steroidal anti-inflammatory agent: Over the counter pain relief can help reduce any soreness or swelling.

d. Supplement: Quercetin, a natural compound found in plants, has been shown to ease inflammation in some men who have prostatitis.

2. Therapy

a. Prostate massage: This helps empty fluid from your prostate duct. Having it done 2 to 3 times a week could help. Frequent ejaculation may help just as much.

b. Physical therapy: sometimes prostatitis is caused by a problem with your pelvic floor muscles. These support your bladder and bowel and help with sexual function.

c. Urinary catheter: If the patient can't pee, a nurse can insert a flexible tube into the urethra to drain the bladder.

d. Mental health therapy: Stress, depression and feeling helpless may play a part in some type of prostatitis.

B. Benign prostatic hyperplasia

1. Medication

a. Alpha blockers: It relaxes bladder neck muscle and muscle fiber in the prostate, making urination easier.

b. 5-alpha reductase inhibitors: It shrinks the prostate by preventing hormonal changes that causes prostate growth.

c. Combination drug therapy: Both alpha blockers and 5-alpha reductase can be recommended at the same time.

2. Surgical therapy

There are several types of surgical therapies.

Transurethral resection of the prostate (TURP)

A lighted scope is inserted into the urethra, and the surgeon removes all but the outer part of the prostate. TURP generally relieves symptoms quickly. After TURP you might temporarily need a catheter to drain your bladder because of stronger urine flow.

Transurethral incision of the prostate (TUIP)

A lighted scope is inserted into the urethra, and the surgeon makes one or two small cuts in the prostate gland making it easier for urine to pass through the urethra. This surgery might be an option if you have a small or moderately enlarged prostate gland, especially if you have health problems that make other surgeries too risky.

Transurethral microwave thermotherapy (TUMT)

A special electrode is inserted through the urethra into your prostate area. Microwave energy from the electrode destroys the inner portion of the enlarged prostate gland, shrinking it and easing urine flow. TUMT might only partially relieve your symptoms, and it might take some time before you notice results. This surgery is generally used only on small prostates in special circumstances because re-treatment might be necessary.

Transurethral needle ablation (TUNA)

A scope is passed into the urethra, allowing your doctor to place needles into your prostate gland. Radio waves pass through the needles, heating and destroying excess prostate tissue that's blocking urine flow. TUNA may be an option in select cases, but the procedure is rarely used any longer.

3. Therapeutic interventions

a. Laser therapy

A high-energy laser destroys or removes overgrown prostate tissue. Laser therapy generally relieves symptoms right away and has a lower risk of side effects than does non laser surgery. Laser therapy might be used in men who shouldn't have other prostate procedures because they take blood-thinning medications.

- The options for laser therapy include: **Ablative procedures.** These procedures vaporize obstructive prostate tissue to increase urine flow. Examples include photoselective vaporization of the prostate (PVP) and holmium laser ablation of the prostate (HoLAP). Ablative procedures can

cause irritating urinary symptoms after surgery, so in rare situations another resection procedure might be needed at some point.

- **Enucleative procedures.** Enucleative procedures, such as holmium laser enucleation of the prostate (HoLEP), generally remove all the prostate tissue blocking urine flow and prevent regrowth of tissue. The removed tissue can be examined for prostate cancer and other conditions.

b. Embolization

In this experimental procedure, the blood supply to or from the prostate is selectively blocked, causing the prostate to decrease in size. Long-term data on the effectiveness of this procedure aren't available.

c. Prostatic urethral lift (PUL)

Special tags are used to compress the sides of the prostate to increase the flow of urine. The procedure might be recommended if you have lower urinary tract symptoms. PUL also might be offered to some men concerned about treatment impact on erectile dysfunction and ejaculatory problems, since the effect on ejaculation and sexual function is much lower with PUL than it is with TURP.

d. Open or robot-assisted prostatectomy

The surgeon makes an incision in your lower abdomen to reach the prostate and remove tissue. Open prostatectomy is generally done if you have a very large prostate, bladder damage or other complicating factors. The surgery usually requires a short hospital stay and is associated with a higher risk of needing a blood transfusion.

Prostate cancer

Surgical intervention

A. Bilateral orchiectomy

Bilateral orchiectomy is the surgical removal of both testicles

B. Radical (open) prostatectomy

A radical prostatectomy is the surgical removal of the entire prostate and the seminal vesicles. Lymph nodes in the pelvic area may also be removed. This operation has the risk of affecting sexual function. Nerve-sparing surgery, when possible, increases the chance that a man can maintain his sexual function after surgery by avoiding surgical damage to the nerves that allow erections and orgasm to occur. Orgasm can occur even if some nerves are cut because these are separate processes. Urinary incontinence is also a possible side effect of radical prostatectomy. To help resume normal sexual function, men can receive drugs, penile implants, or injections. Sometimes, another surgery can fix urinary incontinence.

C. Transurethral resection of the prostate (TURP)

TURP is most often used to relieve symptoms of a urinary blockage, not to treat prostate cancer. In this procedure, with the patient under full anesthesia, which is medication to block the awareness of pain, a surgeon inserts a narrow tube with a cutting device called a cystoscope into the urethra and then into the prostate to remove prostate tissue.

D. Robotic or laparoscopic prostatectomy

This type of surgery is less invasive than a radical prostatectomy and may shorten recovery time. A camera and instruments are inserted through small keyhole incisions in the patient's abdomen. The surgeon then directs the robotic instruments to remove the prostate gland. In general, robotic prostatectomy causes less bleeding and less pain, but the sexual and urinary side effects are similar to those of a radical (open) prostatectomy. The surgeon determines whether your treatment center offers this procedure and how it compares with the results of the radical (open) prostatectomy.

Therapeutic intervention

A. Radiation therapy

There are two types of radiation therapy, which are

1. External-beam radiation therapy

External-beam radiation therapy is the most common type of radiation treatment. The radiation oncologist uses a machine located outside the body to focus a beam of x-rays on the area with the cancer. Some cancer centers use conformal radiation therapy (CRT), in which computers help precisely map the location and shape of the cancer. CRT reduces radiation damage to healthy tissues and organs around the tumor.

2. Brachytherapy

Brachytherapy, or internal radiation therapy, is the insertion of radioactive sources directly into the prostate. These sources, called seeds, give off radiation just around the area where they are inserted and may be left for a short time (high-dose rate) or for a longer time (low-dose rate). Low-dose-rate seeds are left in the prostate permanently and work for up to 1 year after they are inserted. However, how long they work depends on the source of radiation. High-dose-rate brachytherapy is usually left in the body for less than 30 minutes, but it may need to be given more than once.

B. Focal therapy

Focal therapies are less-invasive treatments that destroy small prostate tumors without treating the rest of the prostate gland. These treatments use heat, cold, and other methods to treat cancer, mostly for low-risk or intermediate-risk prostate cancer. Focal therapies are being studied in clinical trials. Most have not been approved as standard treatment options.

4. A. Prostatitis

Nursing care

- a. Administration of prescribed antibiotics.
- b. Provision of comfort.

Client teaching

- a. Continuing antibiotics therapy.

- b. Increase fluid intake.
- c. Recognizing recurrent signs and symptoms of prostatitis.

B. Benign prostatic hyperplasia

Nursing care

- a. Obtain history of voiding symptoms including onset, frequency of daytime and nighttime urination, presence of urgency, dysuria, sensation of incomplete bladder emptying, and decreased force of stream.
- b. Perform rectal and abdominal examination to detect distended bladder, degree of prostatic enlargement.
- c. Perform simple urodynamic measures uroflowmetry and measurement of post void residual, if indicated.

Client teaching

- a. The patient should exercise to regain urinary control.
- b. The patient should avoid activities that produce valsalva maneuver like straining and heavy lifting.
- c. The patient should be taught to avoid spicy foods, alcohol, and coffee.
- d. The nurse should instruct the patient to drink enough fluid.

C. Prostatic cancer

Nursing care

- a. History collection
- b. Physical examination regarding presenting urinary problems, voiding functions, UTI, urinary retention, dysuria.
- c. Obtain family history of PCA.
- d. Nutritional and lifestyle assessment.

Client teaching

- a. Patient should drink enough fluid.
- b. Patient should avoid spicy food, alcohol etc.
- c. patient should exercise for easy urine retention.

