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 **MATRIC NO: 18/MHSO2/200**

 **DISORDERS OF THE PROSTATE GLAND**

 **PROSTATE CANCER**

Prostate cancer is cancer that occurs in the prostate, a small walnut shaped-gland in men that produces seminal fluid that nourishes and transport sperm.

**Signs and symptoms**: frequent urination, weak or interrupted urine flow or need to strain to empty the bladder, nocturia, blood in seminal fluid, pain/burning during urination, discomfort/pain when sitting caused by enlarged prostate.

Risk factors: it typically affects men over the age of 50years. The cause remains unknown.

  **DIAGNOSIS**

1. PSA test: is a type of protein released by prostate tissues that is found in higher levels in a

Man blood level. It can be raised when there is abnormal activity in the prostate including prostate cancer, BPH or inflammation of the prostate. Doctors can look at features of PSA value, such as absolute level, change over time (also known as PSA velocity), and level in relation to prostate size, to determine if biopsy is needed

1. Biopsy: a biopsy is the removal of a small amount of tissue for examination under a microscope. To get a tissue sample a surgeon must often use TRUS and biopsy tool to take very silvers of prostate tissue.
2. MRI fusion biopsy: an MRI fusion biopsy combines an MRI scan with TRUS.
3. Trans rectal ultrasound (TRUS): a doctor inserts a probe into the rectum that takes a picture of the prostate using sound waves that bounce off the prostate. A TRUS is usually done as the same time as biopsy.

 **TREATMENT**

Radiation therapy: it is the use of high energy rays to destroy cancer cells. Types of radiation therapy are:

(a). Intensity-modulated radiation therapy (IMR): IMR is a type of external beam radiation therapy that uses a form of 3D picture of the prostate before treatment. A computer uses this information about the size, shape, and location of the prostate cancer to determine how much radiation is needed to destroy it.

(b). Proton therapy: (also called proton beam therapy) is a type of external beam therapy that uses protons rather than x-rays. At high energy, protons can destroy cancer cells.

(c). Ext ernal beam radiation therapy: the most common type of treatment. The oncologist uses a machine located outside the body to focus a beam of x-rays on the area with cancer.

 **SURGERIES**

1. Radical open prostatectomy: it is the removal of the entire prostate and seminal vesicles. Lymph nodes in the pelvic area may also be removed. This operation has the risk of affecting sexual function.
2. Robotic or laparoscopic prostatectomy: this type of surgery is less invasive than a radical prostatectomy and any shorten recovery time. A camera and instruments are inserted through small keyhole incisions in the patient abdomen. The surgeon then directs the robotic instruments to remove the prostate gland.
3. Bilateral orchiectomy: it is the surgical removal of both testicles
4. Transurethral resection of the prostate (TURP): TURP is the most often used to relieve symptoms of a urinary blockage, not to treat prostate cancer.

 **NURSING MANAGEMENT**

1. Active surveillance/ monitoring.
2. Educate patients and caregivers about treatment options benefits and risks.
3. Monitor treatment response.
4. Patients advocate.
5. Consent.
6. Care coordination.
7. Point of contact/ liaison with other clinical services.
8. Arrange follow up appointments and monitor blood results.

  **(B)** **BENIGN PROSTATE HYPERPLASIA**

 It is also called prostate enlargement, is a noncancerous increase in size of the prostate gland.

SIGNS AND SYMPTOMS: frequent urination, trouble when urinating, weak stream, inability to urinate, or loss of bladder control.

Complications include: urinary tract infections, bladder stones, and chronic kidney problems.

Risk factors: family history, obesity, type 2 diabetes, not enough exercise, erectile dysfunction.

 **CAUSES**

1. Elevated estrogen levels: it occurs when men have elevated estrogen levels and when prostate tissue becomes more sensitive.
2. Smoking: smoking increase the risk of acquiring benign prostate hyperplasia.
3. Reduced activity levels: a sedentary lifestyle could also lead to the development of BPH.
4. Western diet: a high diet in animal fat, protein and refined carbohydrates while low in fiber predisposes a man to BPH.

 **TREATMENT**

Medications (a): alpha blockers: these medications relax bladder neck muscles and muscle fibers in the prostate making urination easier. Alpha blocker usually work quickly in men with small prostates side effects include dizziness.

(b). 5-alpha reductase inhibitors: they are medications that shrink prostate by preventing hormonal changes that cause prostate growth, side effects include retrograde ejaculation.

(c). Combination drug therapy: the doctor might recommend taking an alpha blocker and a 5-alpha reductase inhibitor at the same time of medication alone isn’t effective.

(d). Tadafil (Cialis): this medication, which is often used to treat erectile dysfunction can also treat prostate enlargement**.**

 **SURGERIES**

1. Transurethral resection of the prostate: a lighted scope is inserted into the ureter, and the surgeon removes all but the outer part of the prostate.
2. Transurethral incision of the prostate (TUIP): a lighted scope is inserted into the urethra and the surgeon makes one or two
3. Small cuts in the prostate gland making it easier for urine to pass through the urethra.
4. Laser therapy: a high- energy laser destroys or removes overgrown prostate tissue. Laser therapy generally relieves symptoms right away and has lower risk if side effects than non -laser surgery.
5. Prostatic urethral lift (PUL): special tags are used to compress the sides of the prostate to increase the flow of urine.
6. Embolization: in this procedure, the blood supply to or from the prostate is selectively blocked, causing the prostate to decrease in size.
7. Open or robot-assisted prostatectomy: the surgeon makes an incision in the lower abdomen to reach the prostate and remove tissue.

  **NURSING MANAGEMENT**

1. Relieve acute urinary retention (with the use of catheter).
2. Promote comfort.
3. Prevent further complications.
4. Help patients deal with psychosocial concerns.
5. Provide information about disease process or prognosis and treatment needs.
6. Active surveillance.
7. Minimal invasive.
8. Surgery.

 **(C) ACUTE BACTERIAL PROSTATITIS**

It is a serious bacterial infection of the prostate gland.

SIGNS AND SYMPTOMS: men with acute prostatitis often have chills, fever, and pain in the lower back, perineum, or genital area, urinary frequency and urgency at night, burning or painful urination, body aches, and a demonstrable infection of the urinary tract, as evidenced by white blood cells and bacteria in the urine. Acute prostatitis may be a complication of the prostate.

  **TREATMENT**

Antibiotics are used for the treatment of antibiotics such as tetracycline, fluoroquinolones, are used in the treatment in acute prostatitis.

 **DIAGNOSIS**

1. Physical examination: the nurse might do a digital rectal exam (DRE). The doctor will press and feel the prostate to see if it is enlarged and tender. If the patient has prostatitis it may hurt a little.

  **TESTS**

1. Ultrasound: to get closer look at the prostate gland. An ultrasound uses sound wave to show a picture of the prostate.
2. Urine and prostate fluid tests: when prostate is massaged during DRE, a fluid called expressed prostatic secretion (EPS) comes out of the penis. Urine and EPS are checked for signs of inflammation and infection.
3. Urine flow studies (Urodynamic): these help measure the strength of your urine flow. These tests also spot any blockage caused by the prostate, urethra, or pelvic muscle.

 **CAUSES**

It is caused by bacterial infection in the prostate. Bacteria can get into the prostate when infected urine flows backwards from the urethra.

  **NURSING MANAGEMENT**

1. Provision of comfort
2. Ensure adequate diet
3. Adequate surveillance
4. Educate patients and caregivers about the disease conditions
5. Administer prescribed antibiotics