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**Assignment**

1. The different disorder of the prostate gland

2. Their aetiologies

3. Their therapeutic intervention as well as surgeries

4. The nursing care and the client teaching in the different conditions

**Answer**

The prostate gland is part of the male reproductive system, and it is a walnut-sized gland found in men that is located below the bladder and in front of the rectum. It surrounds the urethra, the tube through which urine and semen exit the body. Its main function is to produce seminal fluid in order to transport sperm through the urethra.

There are 3 common disorder of the prostate gland.

1. Benign prostatic hyperplasia 2. Prostatitis 3. Prostate cancer

1. **Benign prostatic hyperplasia BPH**:

This is also known as prostate gland enlargement.it is a noncancerous increase in size of the gland which causes urinary symptom and an untreated prostate gland enlargement can block the flown of urine causing retention, urinary tract infection and kidney problem.

**AETIOLOGY**

It occurs when men have elevated estrogen levels and when prostate tissue becomes more sensitive to estrogens and less responsive to DHT. Dihydrotestosterone (DHT) and estrogen are critical mediator of prostatic growth**.** It occurs when the cells of the prostate gland begin to multiply. These additional cells cause your prostate gland to swell, which squeezes the urethra and limits the flow of urine.

**THERAPEUTIC INTERVENTION**

Pharmacologic treatment for BPH includes;

* Use of alpha-adrenergic blockers and 5-alpha-reductase inhibitors (Alpha-adrenergic blockers, relax the smooth muscle of the bladder neck and prostate. This improves urine flow and relieves symptoms of BPH. The 5-alpha-reductase inhibitors are used to prevent the conversion of testosterone to DHT and decrease prostate size
* Use of phototherapeutic agents and other dietary supplements e.g.palmetto berry and African plum. They may function by interfering with the conversion of testosterone to DHT, theymay directly block the ability of DHT to stimulate prostate cell growths

**Surgeries**

1. Minimally Invasive Therapy
* Transurethral microwave heat treatment(TUMT) involves the application of heat to prostatic tissue. A transurethral probe is inserted into theurethra, and microwaves are directed to the prostate tissue. The targeted tissue becomes necrotic and sloughs.
* Transurethral needle ablation [TUNA]) TUNA uses low-level radio frequencies delivered by thin needles placed in the prostate gland to produce localized heat that destroys prostate tissue while sparing other tissues. The body then resorbs the dead tissue.
1. Surgical Resection
* Transurethral resection of the prostate (TURP. It involves the surgical removal of the inner portion of the prostate through an endoscope inserted through the urethra. The treated tissue either vaporizes or becomes necrotic and sloughs
* Transurethral incision of the prostate (TUIP) it’s a procedure used to treat smaller prostates. One or two cuts are made in the prostate capsule to reduce constriction of the urethra and decrease resistance to flow of urine out of the bladder, and no tissue is removed
1. Open prostatectomy

 Open prostatectomy involves the surgical removal of the inner portion of the prostate via a suprapubic, retro pubic, or perinea (rare) approach for large prostate glands.

Others include **transurethral electro vaporization**, **and laser therapy**,

**NURSING CARE AND CLEINT EDUCATION**

1. Ensure proper rest from the patient and Promote comfort.
2. Educate on nutrition, vitamin supplement, folic acid, and iron (anemia
3. Monitor for hemorrhage, shock and Prevent complications.
4. Relieve acute urinary retention.
5. Help patient deal with psychosocial concerns.
6. Provide information about disease process/prognosis and treatment needs.
7. Maintain fluid balance
8. The patient and the family require instructions about how to promote recovery.
9. Urinary control. The nurse should teach the patient exercises to regain urinary control.
10. Avoid Valsalva maneuver. The patient should avoid activities that produce Valsalva maneuver like straining and heavy lifting.
11. Avoid bladder discomfort. The patient should be taught to avoid spicy foods, alcohol, and coffee
12. Follow up care for 6 month and above

2. **PROSTATITIS**

This is the swelling, inflammation of the prostate gland associated with lower urinary tract symptoms and symptoms of sexual discomfort and dysfunction. The micro-organisms colonize the urinary tract and ascend to the prostate causing infection.it classified into

* **Acute bacterial prostatitis**: Caused by a bacterial infection, and it typically starts suddenly and may include [flu-like symptoms](https://www.medicinenet.com/flu/symptoms.htm).
* **Chronic bacterial prostatitis**: Described by recurrent [bacterial infections](https://www.medicinenet.com/bacterial_infections_101_pictures_slideshow/article.htm) of the prostate gland, the symptoms might be minor or be symptom free but it can be difficult to treat successfully.
* **Chronic prostatitis/chronic**[**pelvic pain**](https://www.medicinenet.com/pelvic_pain_in_women_and_men/article.htm)**syndrome**: Can be described as inflammatory or no inflammatory, depending upon the presence or absence of infection-fighting cells in the urine, semen, and prostatic fluid.
* **Asymptomatic inflammatory prostatitis:** This condition is often diagnosed incidentally during the workup for [infertility](https://www.medicinenet.com/infertility/article.htm) or [prostate cancer](https://www.medicinenet.com/prostate_cancer/article.htm). Individuals will not complain of symptoms or discomfort, but they will have the presence of infection-fighting cells present in semen/prostatic fluid.

 **AETIOLOGY**

Prostatitis can be caused by bacteria that leak into the prostate gland from the urinary tract and from direct extension or lymphatic spread from the rectum. It can also result from various sexually transmitted organisms such as Neisseria gonorrhea, Chlamydia trachomatis, or HIV.

**THERAPEUTIC INTERVENTION**

1. **Antibiotics** such as ciprofloxacin, low-dose antibiotics may be used to suppress infection
2. **Alpha-adrenergic blocker therapy** e.g. tamsulosin may be prescribed to promote bladder and prostate relaxation.
3. **Anti-inflammatory agent** non steroids may help relieve pain and make feel comfortable

No pharmacologic therapies including

**Biofeedback i**s to teach how to use your thought to control your body

Others include **acupuncture, pelvic floor training, physical therapy, reduction of prostatic fluid retention by ejaculation through sexual intercourse** **or masturbation, sitz baths, stool softeners, and evaluation of sexual partners to reduce the possibility of cross-infection.**

**NURSING CARE AND CLIENT EDUCATION**

1. Be hospitalized for intravenous (IV) antibiotic therapy.
2. Administration of prescribed antibiotics and provision of comfort measures, including prescribed analgesic agents and sitz baths.
3. Promoting Home and Community-Based Care Teaching Patients Self-Care
4. Education about the necessary food and nutrition needed to aid fast recovery
5. A suprapubic catheter may be necessary for severe urinary retention.
6. Avoid sexual arousal and intercourse should be avoided.
7. To minimize discomfort, the patient should avoid sitting for long periods.
8. follow-up is necessary for at least 6 months to 1 year
9. educated patient about recurrent of infection and how to identify symptoms

3**. PROSTATE CANCER**

This is a type of cancer found in the prostate of men. It is the most common type of cancer in men.it has no signs and symptoms in its early stage. The cancer cells may spread from the prostate to other areas of the body, particularly the bones and lymph nodes.

**AETIOLOGY**

Prostate cancer begins when some cells in your prostate become abnormal. Mutations in the abnormal cells' DNA cause the cells to grow and divide more rapidly than normal cells do. The abnormal cells continue living, when other cells would die. The accumulating abnormal cells form a tumor that can grow to invade nearby tissue

**THERAPEUTIC INTERVENTION**

Surgical Management

* Radical prostatectomy is used with patients whose tumor is confined to the prostate. It is the complete surgical removal of the prostate, seminal vesicles, tips of the vas deferens, and often the surrounding fat, and nerves
* Transurethral Resection of the Prostate (TURP). The gland is removed in Small chips with an electrical cutting loop this procedure eliminates the risk of transurethral resection Syndrome
* Suprapubic Prostatectomy an incision is made into the bladder, and the prostate gland is removed from an approach can be used for a gland of any size, and few complications occur, although blood loss may be greater than with the other methods
* Perianal Prostatectomy: The prostate gland is removed through an incision in the perineum
* Retropubic Prostatectomy :The surgeon makes a low abdominal incision and approaches the prostate gland between the Transurethral Incision of the Prostate
* Laparoscopic Radical Prostatectomy:The laparoscopic approach reduces the risk of postoperative erectile dysfunction and urinary dysfunction
* Robotic-Assisted Laparoscopic Radical Prostatectomy :Is a new minimally invasive approach that uses a computer console and da Vinci robot to move the tips of microscopic instruments, replicating the movements of the surgeon’s hands

Radiation Therapy Two major forms of radiation therapy are used to treat cancer of the prostate

* Teletherapy (external beam radiation therapy
* Brachytherapy (internal implants) involves the implantation of interstitial radioactive seeds under anesthesia.

Hormonal Strategies

* Androgen deprivation therapy (ADT) is used to suppress androgenic stimuli to the prostate by decreasing the level of circulating plasma testosterone or interrupting the conversion to binding DHT. This effect is accomplished either by surgical castration or by medical castration with the administration of medications, such as luteinizing hormone–releasing hormone (LHRH) agonists.
* Anti-androgens may be prescribed for patients who do not show adequate serum testosterone suppression with medical or surgical castration
* orchiectomy surgery to remove testicles reduce testosterone level in the body

Chemotherapy

These uses drug to kill rapidly growing cells including cancer cells

Cryosurgery of the prostate is used to ablate prostate cancer in patients who cannot tolerate surgery and in those with recurrent prostate cancer. Transperineal probes are inserted into the prostate under ultrasound guidance to freeze the tissue directly.

Anti-androgen therapies are used in an effort to reduce the circulating androgens. If anti-androgen therapies are not effective, medications such as prednisone have been effective in reducing pain and improving quality of life.

Biological therapy uses immune system to fight cancer cells e.g. sipuleunce-T

**NURSING CARE AND CLIENT EDUCATION**

1. maintain fluid balance input and output
2. relieve pain and anxiety
3. Monitoring and Managing Potential Complications
4. Providing information about the procedure prognosis and treatment
5. Promoting nutrition, vitamins e.g. iron
6. Educate patient and care givers about treatment options benefits and risk
7. Encourage continues screening and other health promotion activities
8. Given assurance and support for therapies e.g. chemotherapy etc.
9. Arrange follow up care list and monitor blood results