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**DEPARTMENT: NURSING**

**COURSE TITLE: MED SURG IN NURSING**

**COURSE CODE: NSC 306**

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**QUESTION: Discuss prostate disease under the following headings**

**Overview**

**Etiology/cause**

**Surgical interventions**

**Nursing care/management**

**Health education/patient teaching**

**PROSTATE DISEASE:** There are three distinct types of diseases of the prostate gland. These diseases share many symptoms, but have different causes. These prostate diseases include;

**BENIGN PROSTATE HYPERTROPHY (BPH):** this is the enlargement of the prostate gland that constricts the urethra lading to urinary symptoms. It is also a non-cancerous enlargement of the prostate gland that affects approximately 50% of all men before the age of 50 and greater than 75% of men over the age of 60.

**ETIOLOGY: the causes include:**

* Hormonal disturbances (Increased estrogen with decreased androgens)
* Autoimmune responses
* Arteriosclerosis
* Metabolic or nutritional deficiency
* Aging
* Infections
* Tumors

**SURGICAL INTERVENTIONS FOR PATIENTS WITH BENIGN PROSTATE HYPERTROPHY**

Benign prostate hypertrophy can be treated with partial or open prostatectomy.

1. **TRANSURETHRAL RESECTION (THROUGH THE URETHRA**): This is the removal of the enlarged portion of the prostate by inserting the instrument (electrical cutting loop) through the urethra.

**2. SUPRAPUBIC (TRANSVESICAL) RESECTION:** This is the incision to remove the prostate gland made into the bladder.

**3. PERINEAL RESECTION**: This is the incision made to remove the prostate g land made through the perineum.

**4. RETROPUBIC REWSECTION**: This is the incision made to remove the prostate gland that is made through the lower abdominal wall.

**5. OPEN PROSTATECTOMY**: This surgery is done for men who have such large prostate gland that performing transurethral surgery would not be safe. Specifically for patients whose prostate gland exceeds 80 grams.

**6. TRANSURETHRAL NEEDLE ABLATION**: this is done by inserting a cytoscope into the tip of the penis through the urethra. Here, the surgeon guides the tiny needles to the tissue in the prostate and then deliver the radio waves. This is done for men who want to limit anesthesia and those who have too many medical problems for surgery.

**6. HIGH INTENSITY FOCUSED ULTRASOUND**: this procedure helps to reduce the damage that was done to surrounding tissue by placing ultrasound probe into the rectum to transmit ultrasonic energy to heat the prostate to a very high temperature, causing the tissues in the prostate to reduce in size. This procedure is done for men with a large prostate gland who do not want surgery.

**NURSING MANAGEMENT/INTERVENTION**

Nursing management and interventions include:

* Catheterization to empty the bladder
* Hormonal therapy to balance estrogen-androgen levels
* Antibiotics for infections
* Examination with objective and subjective data
* Obtain history of voiding symptoms, onset, and frequency of day and night urination, presence of urgency, dysuria, and sensation of incomplete bladder emptying
* Perform rectal examination to detect distended bladder and degree of enlargement; size, shape and consistency.

**FOR PRE OPERATIVE CARE;**

* Observe all general preoperative care
* Allay all patients’ fear and anxiety
* Explain the type of surgery
* Carry on with shaving and insertion of the urinary catheter
* Seek consent, intravenous line, site preparation

**PATIENT HEALTH EDUCATION**

* Explain the symptoms and complication of BPH; Urinary retention, cystitis, increase in in irritating voiding symptoms by encouraging patient to report the symptoms
* Teach patient to do kegel exercises after surgery to help gain control over voiding
* Contract perineal muscles for 10-15 seconds, then relax. Repeat this for 15 times.
* Do 15 sets per day
* Advice and tell patients to avoid sexual intercourse, straining at stool, heavy lifting and long periods of sitting for 6 to 8 weeks after surgery until Prostatic fossa is healed.
* Advice follow up visits as urethra stricture may occur and regrowth of prostate is possible.

**PROSTATE CANCER**

This is the disease of the prostate. It is the second leading cause of cancer deaths among men. However, early detection often leads to effective treatment of prostate cancer. In majority of cases, prostate cancer is detected when it is still localized, rather than metastasized (spread). Its symptoms include; difficulty with beginning urination; a frequent need to urinate, primarily at night; anuria weak or sporadic urine flow; dysuria; painful ejaculation, hematuria etc.

**ETIOLOGY**: The etiology of prostate cancer remains an elusive concept. Several factors are thought to contribute to its development. These factors include;

* Genetic predisposition
* Diet
* Infections
* Hormonal imbalance
* Exposure to toxins
* Some amounts of significance are attached to the relationship between smoking and prostate cancer.

**THERAPEUTIC INTERVENTIONS FOR PROSTATE CANCER**

Medications like;

Abiraterone acetate (Zytiga)

APalutamide (Erleada)

Enzalutamide (Xtandi) could be given to stop the tumor from growing by bringing your testosterone levels down.

**SURGICAL INTERVENTIONS FOR PATIENTS WITH PROSTATE CANCER**

These procedures include;

1. **OPEN OR LAPAROSCOPIC RADICAL PROSTATECTOMY**: here, the surgeon makes an incision to remove the prostate and nearby tissues. In a laparoscopic prostatectomy, the surgeon makes several smaller incisions and uses special long surgical tools to remove the prostate.
2. **RADICAL RETROPUBIC PROSTATECTOMY**: for this operation, the surgeon makes an incision in the lower abdomen, from the belly button down to the pubic bone. This is also done to remove the prostate as well as its tissues nearby.
3. **ROBOTIC ASSISTED LAPARASCOPIC RADICAL PROSTATECTOMY**: in this approach, the surgery is done using a robotic system; the surgeon sits at a control panel in the operating room and moves the robotic arms to operate through several small incisions in the patients’ abdomen.
4. **TRANSURETHRAL RESECTION OF THE PROSTATE:**  Though this procedure is done for those with BPH, it is sometimes used in men with advanced prostate cancer
5. **RADIATION THERAPY FOR PROSTATE CANCER:**  example is the external beam radiation or brachytherapy.
6. **HORMONE THERAPY FOR PROSTATE CANCER**
7. **CRYOTHERAPY FOR PROSTATE CANCER**

**NURSING MANAGEMENT/INTERVENTIONS**

Treatment for prostate cancer depends on many factors including age at diagnosis, stage and grade of cancer, other comorbidities, and the patients’ thoughts about side effects and the quality of life. Nurses relieve patients of stressors because sexual and urinary functions, perceptions of self, and quality of life can be a major one for this population. Although the list is in exhaustive, some common chronic and long term complications that may affect prostate cancer survivors include;

* Obtain an objective and subjective data
* Assess the bladder for distention to suggest fluid retention
* Monitor vital signs
* Observe for signs of hypertension and infection. Urinary retention leads to infection which can be evidenced by fever. Fluid retention puts stress on the kidneys and heart rate and may increase blood pressure and heart rate.
* Insert indwelling catheter as per facility protocol
* Nutrition and life style education
* Prostate specific antigens levels and digital rectal exams are recommended for those who are using expectant management as well as those who have been treated.
* Continued surveillance and annual physical exams are important in prostate cancer nursing management and should be reinforced by the nurse.

**PATIENT HEALTH EDUCATION**

Patients should be educated on basic lifestyle changes like;

* Exercises to strengthen the pelvic floor muscles
* Limit caffeine and alcohol intake; they increases one’s urge to void which in turn irritates the bladder.
* Fluids intake should be reduced too especially before you go out or go to bed.

**PROSTATITIS**

This is the inflammation of the prostate gland characterized or caused by a bacterial infection. Prostatitis could be acute or chronic based on the type of bacterial it is infected with as well as its severity, from the reflux of infected urine into the ejaculatory and prostatic ducts. It could also be from haematogenous origin or lymphogenous spread

**ETIOLOGY:**  the cause could be classified as acute, chronic or a nonbacterial cause of prostatitis

**FOR ACUTE PROSTATITIS:** it is caused by bacteria such as pseudomonas and gram positive cocci such as streptococcus and staphylococcus.

**FOR CHRONIC PROSTATITIS:** it is caused by bacteria such as gram negative e.g. E. coli, websiella and Pneumonia and pseudomonas aeruginosa

**NONBACTERIAL PROSTATITIS:** it is a condition in which there is persistent pain in the prostate gland. This condition is sometimes called chronic (long lasting) prostatitis or chronic pelvic pain syndrome. It is caused by a past bacterial prostatitis infection.

Asymptomatic inflammatory prostatitis does not show any noticeable symptoms

**THERAPEUTIC MANAGEMENT FOR PROSTATITIS**

**Antibiotics:** it is used mostly for acute prostatitis. It is the most commonly prescribed treatment for prostatitis.

**Alpha-blockers**: these medications help to relax the bladder neck and the muscle fibers where your prostate joins the bladder.

**Anti-inflammatory agents**: NSAIDS might make a patient feel more comfortable

**SURGICAL INTERVENTION FOR PROSTATITIS**

They include:

**LAPAROSCOPIC PROSTATECTOMY**: here, the surgeon makes an incision to remove the prostate and nearby tissues. In a laparoscopic prostatectomy, the surgeon makes several smaller incisions and uses special long surgical tools to remove the prostate.

**TRANSURETHRAL PROSTATECTOMY FOR PROSTATECTOMY:** This procedure involves the removal of a part of the prostate gland through the urethra. A thin long tube with a viewing instrument (cytoscope) attached is inserted into the urethra. Prostate tissue is removed through the cytoscope.

**NURSING CARE FOR PRATIENTS WITH PROSTSTITIS**

* Obtain history of previous urinary tract infections, sexually transmitted infections or voiding pattern
* Collect some specimens of urine for culture and prostatic secretions.
* Start as prescribed antibiotics therapy according to the results of the culture and sensitivity
* Tepid sponge and administer antipyretic when necessary
* Keep patient well hydrated by avoid over hydration
* Administer analgesics and anti-inflammatory drugs as prescribed
* Maintain bed rest to relief perineal and suprapubic pain

**PATIENT HEALTH EDUCATION**

Antibiotics may not help nonbacterial prostatitis. Changing your diets or taking warm baths may help.

Educate patient on the need for safe sex which helps to reduce the risk of developing this condition.

Patients should aware that their treatments and managements are based on the type of prostatitis they have.

* Health educate on the importance of completing the course of treatment
* Instruct on sitz bath 10-20 minutes daily
* Void sitting for long periods of time. Advice to avoid sexual intercourse/arousal may be beneficial till cleared
* Encourage follow up because occurrence is possible