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Assignment: what are the different disorders of prostate gland?

The different disorders of prostate gland are:

1. Prostatitis
2. Benign prostate hyperplasia
3. Cancer of the prostate

PROSTATITIS

DEFINITION: is an Inflammation of the prostate gland that is often associated with lower urinary tract symptoms and symptoms of sexual discomfort and dysfunction. It is the most common urologic diagnosis in men younger than 50yrs.

**Causes of prostatitis**

* Infectious agent (bacteria, fungi, mycoplasma) or other conditions such as urethral stricture, benign prostate hyperplasia.
* Escherichia coli is the most common isolated organism

**Types of prostatitis**

* Acute bacterial prostatitis and chronic bacterial prostatitis (type1 and type 2)
* Chronic prostate/chronic pelvic pain syndrome (CP/CPPS type 3)
* Asymptomatic inflammatory prostatitis (type 4)

**Clinical manifestations:** acute prostatitis is characterized by sudden onset of fever, dysuria, perineal prostatic pain, severe lower urinary tract symptoms.

**Therapeutic intervention:** the goal of treatment is to eradicate casual organism. Hospital admission may be necessary, unstable vital sign, sepsis or intractable pelvic pain. Those who are immunosuppressed or those who have diabetes or renal insufficiency

**Specific treatment:** culture and sensitivity testing of urine, antibiotic agent including fluoroquinolone (such as ciprofloxacin), anti-inflammatory agents such as tamsulosin(Flomax) may be prescribed to promote bladder and prostate relaxation. Others include biofeedback, pelvic floor training, and physical therapy, reduction of prostate fluid retention by ejaculation through sexual intercourse or masturbation.

**Possible surgery for prostatitis**

* Transurethral resection of the prostate: this is the removal of enlarged portions of the prostate by inserting the instrument(electrical cutting loop) through the urethral.
* Transurethral incision of the prostate: a few small cuts are made in the prostate tissue to reduce glands pressure, making urination easier.
* Open prostatectomy: done during prostate complications.
* Robotic prostatectomy: is a surgery done by making four incisions as to remove the enlarged tissue of the prostate.

**Nursing care**

* ADMISSION: admit patient into the ward and familiarize patient with the ward, its routine.
* ASSESSMENT: assess general condition of the patient. Take nursing history such as: history of voiding symptoms, onset, frequency, urgency, dysuria and sensation of incomplete empty of bladder.
* OBSERVATION: assess vital signs such as temperature, pulse, respiration, BP, document findings
* INVESTIGATION: ensure all necessary investigations are done such as urine culture and sensitivity test, prepare for suprapubic catheterization in case of obstruction due to prostatic swelling from bacterial infection. Provide comfort measures such as position change.
* MEDICATION: give prescribed antipyretic, analgesics such as phenazopyridine and flavoxate to relief pain. Give prescribed antibiotics such as ciprofloxacin to combat infection. Give anti-inflammatory such as Flomax to promote bladder and prostate relaxation. Hydration, stool softener
* NUTRITION: encourage soft diet and increase fiber to promote defecation. To increase fluid intake of 2000-3000m/s per day
* PERSONAL HYGIENE: ensure adequate hygiene and care of suprapubic catheter if insitu using aseptic technique
* PSYCHOLOGICAL CARE: reassure patient and relation, foster nurse patient relationship to relieve anxiety, encourage patient to verbalize his feelings, provide time to answer questions, prepare patient psychologically for possible surgical intervention where necessary.

**Patient education**

* Educate patient on importance of continuing antibiotic therapy
* Recognizing recurrent signs and symptoms of prostatitis
* To adhere to warm sits bath regime(10-20minutes)
* Sexual arousal and intercourse should be avoided, to maintain discomfort patient should avoid sitting down for a long period.
* Medical follow is necessary for at least 6months to a year.

BENIGN PROSTATE HYPERPLASIA

(SENILE ENLARGEMENT OF THE PROSTATE GLAND)

DEFINITION: benign prostate hyperplasia is an enlargement of the prostate gland that constricts the urethra causing urinary symptoms. common in men above age 50. This condition develop slowly and extension of the hyperplasia up to the urinary bladder causes stasis.

**Causes**

* auto immune response
* metabolic or nutritional disturbance
* aging
* hormonal disturbance
* tumor of the prostate
* infection

**Clinical manifestation**

* urinary retention
* difficulty in starting or maintaining urine flow
* dribbling after urination
* frequency, urgency, burning sensation on urination, nocturia, hematuria
* distention of the bladder
* atonic bladder

**Therapeutic intervention:** The goal of treatment/management of benign prostate are to improve quality of life, improve urine flow, relieve obstruction, prevent disease progression and minimize complications.

**Specific treatment:** is based on the severity of symptoms, the cause of disease, the severity of the obstruction and the patient’s condition.

**Other therapeutic choices include:** pharmacologic treatment such as the use of alpha adrenergic blocker and 5-alpha reductase inhibitors (e.g. finasteride(proscar) and durasteride) which are used to prevent the conversion of testosterone to delayed type hypersensitivity(DHT).

**Surgical management:** other major treatment option includes surgery otherwise known as surgical prostatectomy or partial prostatectomy.

* Transurethral resection of the prostate (TURP): it remains the benchmark for surgical treatment for BPH. It involves the surgical removal of the inner portion of the prostate through an endoscope inserted through the urethral.
* Transurethral incision of the prostate (TUIR): transurethral electrovaporization, laser therapy and open prostatectomy. It is an outpatient procedure used to treat smaller prostate.
* Open prostatectomy: involves the surgical removal of the inner portion of the prostate via a suprapubic , retro pubic approach for large prostate gland.

**Nursing care**

* ADMISSION: admit patient into the ward and familiarize patient with the ward, its routine.
* ASSESSMENT: assess the general condition of the patient so as to stabilize those condition that hinders smooth recovery.
* Perform rectal abdominal and rectal examination to detect extended bladder
* INVESTIGATION: Ensure all necessary investigations such as intravenous urogram, cystoscopy, blood count, and urinalysis are done.
* MEDICATION:
* give prescribed analgesics, antispasmodic and antibiotics to combat infection
* hormonal therapy involves hormonal manipulation: anti androgen agent such as 5-alpha reductase inhibitors (finasteride and dutasteride) to prevent the conversion of testoterome to delay type hypersensitivity
* NUTRITION:
* encourage patient to take soft diet
* maintain input and output chart
* personal hygiene
* ensure catheter care to prevent infection
* PSYCHOLOGICAL SUPPORT: nurse/patient relationship to relieve anxiety
* prepare patient psychologically for possible surgical intervention when necessary

**Patient Education**

* Explain the symptoms and complication of BPH (a) Urinary retention ((b) Cystitis (c) Increase in irritative voiding symptoms by encouraging patient to report the symptoms.
* Teach patient the use of relaxation technique, deep breathing and coughing exercise to help prevent post-operative complication.
* Teach patient to do Kegel (Perineal exercise) after surgery to help gain control of voiding.
* Contract perineal muscle for 10-15 secs, then relax. Repeat 15 times.
* Do 15 sets per day.
* Advice and tell patient 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.

CANCER OF THE PROSTATE

DEFINITION: is a disease in which malignant cells form in the tissue of the prostate. It is the most common cancer in men above 50yrs.

**Causes**

* Age (above 50yrs)
* Genes i.e. hereditary
* Endogenous hormones such as androgen and estrogen
* obesity

**Clinical manifestation**

* urinary obstruction (difficulty, frequency, retention and decrease size and force of the urinary stream)
* Blood in the urine or semen and painful ejaculation. Hematuria may occur if the cancer invades the urethra
* sexual dysfunction
* other signs and symptoms include: back ache, hip pain, perineal and rectal discomfort, anemia, weight loss, weakness, nausea, oliguria (decrease urine output)

**Therapeutic intervention**

Treatment is based on the patient’s life expectancy, symptoms, risk of reoccurrence after definite treatment, size of the tumor. Therapy is often guided by the use of risk stratification scheme suggested by the National Comprehensive Cancer Network (NCCN). Management maybe non- surgical and involve watchful waiting or be surgical and entail prostatectomy.

**Surgical management**

RADICAL PROSTATECTOMY: is considered the standard first line treatment for prostate cancer and is used for patient whose tumor is confined to the prostate. It is complete surgical removal of the prostate, seminal vessels, nerves and blood nerves. Laparoscopic radical prostatectomy and robotic assisted laparoscopy

RADIATION THERAPY: two major forms:

* teletherapy (external beam radiation therapy EBRT) it is a treatment option for patients with low risk prostate cancer. It is prescribed by the radiation oncologist for a total dose over a certain time frame. For example 28 treatments over 5 1/2 weeks.
* Brachytherapy (internal implants) involves the implantation of interstitial radioactive seeds under anesthesia. It has become a commonly used monotherapy treatment option for early clinically organ confined prostate cancer.

HORMONAL THERAPY: is androgen deprivation therapy, is commonly used to suppress andregenic stimuli to the prostate by decreasing the level of circulating plasma testosterone or interrupting the conversion to or binding of dihydrotestosterone (DHT).

CHEMOTHERAPY: is a treatment that includes a docetaxe based regimen for non-androgen dependent prostate cancer.

CRYTOSURGERY: is used to ablate prostate cancer in patients who cannot tolerate surgery and in those with recurrent prostate cancer.

**Nursing care**

* ADMISSION: admit patient in the ward and familiarize patient to the ward, patients routine and ward staff.
* Position patient in a comfortable position to relieve comfort
* ASSESSMENT: Assess the general condition of the patient so as to stabilize those condition that hinders smooth recovery
* Take nursing history such as voiding symptoms, difficulty and frequency
* Perform digital rectal examination
* OBSERVATION: Assess vital signs such as temperature, pulse, respiration, BP
* Ensure all necessary investigations are done such as prostate specific antigen (PSA), transrectal ultrasound, prostate MRI and prostate MP-MRI, biopsy
* Prepare for catheterization/ catheterize patient to help heal the bladder
* MEDICATION: Give prescribed psychoactive drugs such as benzodiazepine to reduce stress and calm patient
* NUTRITION: Encourage patient to take healthy diet full of fruits and vegetable rich in vitamins and minerals, to avoid high fat foods, encourage fluid intake up to 2000ml per day

Personal hygiene must be encouraged

* PSYCHOLOGICAL SUPPORT: foster nurse/patient relationship which helps to reduce anxiety
* encourage patient to verbalize his feeling and correct misconception
* provide time to answer question
* prepare patient psychologically for surgical intervention where necessary

**Patient education**

* Explain the symptoms and complication of cancer of the prostate such as difficulty, urinary retention, frequency, and decrease size and force of the urinary stream, blood in the urine and semen and painful ejaculation by encouraging patient to report the symptoms.
* Encourage patient to engage in light exercise such as taking a short walk each day after surgery for about 4-6 weeks
* Advice and tell patient 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.
* Keep follow up appointment