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THE MALE REPRODUCTIVE SYSTEM

THE DIFFERENT DISORDER OF THE PROSTRATE

The prostrate gland (the prostrate) is an organ of the male reproductive system . it is the size of a walnut and is found at the base of the bladder . The thin tube that allows urine and semen to pass out of the penis (the urethra) runs through the prostate gland. Alkaline fluid produced by the prostate gland helps to nourish sperm and leaves the urethra as ejaculate (semen). The prostate undergoes two main growth spurts . The first is fueled by the sex hormones made by the testes during puberty .This prompts the prostate to reach an average weight of 20 grams .The second growth spurts begins when men are in their thirties.

The three common disorders of prostate gland are prostatitis, non cancerous enlargement of the prostrate(benign prostatic hyperplasia or BPH) and prostrate cancer. A man may experience one or more conditions.

1. Inflammation of the prostate (prostatitis): while prostatitis can affect men of any age, it is common in younger men aged between 30 and 50 years .It is the swelling and inflammation of the prostate gland .The main type of prostatitis are:
* Bacterial prostatitis- acute or chronic bacterial infection
* Non- bacterial prostatitis-inflamed prostate also known as chronic pelvic pain syndrome(CPPS).

Pathophysiology of prostatitis

An infection ascending from the urethra , chemical damage caused by the reflux of urine through the ejaculatory and prostatic ducts and autoimmune involvement are a few possible theories related to pathogenesis of various types of pathogenesis of various types of prostatitis. Chronic prostatitis / chronic pelvic pain syndrome is thought to be caused by an abnormality in the hypothalamic -pituitary -adrenal axis and hormonal derangements involving the adrenocortical hormone that can stem from variable response to stress neurogenic inflammation and myofascial pain syndrome.

Causes

* + Acute bacterial prostatitis: is often caused by common strains of bacteria. The infection can start when bacteria in urine leak into the prostate . Antibiotics are used to treat the infection If they don’t eliminate the bacteria prostatitis might reoccur or be difficult to treat(chronic bacterial prostatitis).
	+ Chronic bacterial prostatitis: is caused by bacterial infection .Bacterial get into the prostate through the urethra . It can also be caused by an infection originating in the bladder or by contaminated catheter inserted into the bladder.
	+ Non- bacterial prostatitis(CPPS): can also be caused by a blockage in the urine, abnormal functioning of nerves or muscles, an immune attack on the prostate, microorganisms from sexually transmitted diseases like chlamydia.

Signs/symptoms

* Pain or burning sensation when urinating (dysuria)
* Difficulty urinating , such as dribbling or hesitant urination
* Frequent urination particularly at night(nocturia)
* Urgent need to urinate
* Blood in the urine
* Pain in the abdomen, groin or lower back
* Pain in the area between the scrotum and rectum (perineum)
* Painful ejaculation

Prevention of prostatitis

* Drink more water
* Practice good hygiene
* Reduce caffeine intake
* Practice safe sex
* Consume more fruits and vegetables
* Exercise
* Maintain a healthy living

Complication of prostatitis

* Bacterial infection of the blood(bacteremia)
* Pus-filled cavity in the prostrate(prostatic abscess)
* Semen abnormalities and infertility which can occur with chronic prostatitis
* Inflammation of the coiled tube attached to the back of the testicles(epididymitis)

Risk factors of prostatitis

* Having benign prostatic hyperplasia
* Having frequent , unprotected sex
* Excessive alcohol consumption
* Eating a lot of spicy , marinated foods
* Injury to the lower pelvis (often as a result of cycling, lifting weights, ets)
* Having sexually transmitted disease
* Having had recent bladder infection

The therapeutic intervention of prostatitis

Allopurinol for treating chronic prostatitis. Some antibiotics is used to treat prostatitis that is caused by an infection. Some antibiotics that might be used are trimethoprim- sulfamethoxazole, doxycycline, ciprofloxacin, norfloxacin and olfoxin.

Surgeries for prostatitis

They help to remove nidus of infection

* Transurethral vaporization of the prostate
* Transurethral vaporization of the prostate

Nursing management of prostatitis

* The nurse must administered the patient prescribed drugs to the patient
* The nurse must provide comfort to the patient
* The nurse must make sure the patient is provided with enough fluid intake
* The nurse must make sure the patient continue with antibiotics therapy if the patient was diagnosed with chronic prostatitis

Client teaching by the nurse

1. The nurse must advice the patient to choose healthy food supplements
2. The nurse must advice the patient to exercise regularly
3. The nurse must advice the patient to maintain a healthy weight
4. The nurse must also advice the patient to avoid unprotected sex

Benign prostatic hyperplasia(BPH):is also called prostate gland enlargement is a common condition as men get older. An enlarged prostate gland can cause uncomfortable urinary symptoms, such as blocking the flow of urine out of the bladder. It can also cause bladder urinary tract or kidney problems.

Pathophysiology of benign prostatic hyperplasia

It describes a proliferative process of the cellular elements of the prostate an enlarged prostate or the voiding dysfunction resulting from prostatic enlargement and the bladder outlet obstruction. BPH arises in the periurethral and transition zones of the prostrate.

Causes of Benign prostatic hyperplasia

It is considered a normal condition of male aging and many men older than 80 years have BPH symptoms . Although the exact cause is unknown, changes in male hormones that come with aging may be a factor. Any family history of the prostate problems or any abnormalities with your testicles may rise your risk of BPH . Men who have had their testicles removed at a young age do not develop BPH.

Signs and symptoms of benign prostatic hyperplasia

* Incomplete bladder emptying
* Incontinence or leakage of urine
* A weak urinary stream
* Painful urination
* Blood in the urine
* Nocturia, which is the need to urinate two or more times per night
* A slowed or delayed urinary stream
* Sexual dysfunction

Prevention of benign prostatic hyperplasia

* Do exercise to strengthen your pelvic region
* Limit how much caffeine and alcohol in the body
* Avoid or limit the use of decongestants and antihistamines
* Stay warm
* Limit the amount of fluids

Risk factors of benign prostatic hyperplasia

* Age
* Family history
* Obesity
* Diabetes
* Ethnic Background
* Heart diseases
* An inactive lifestyle

Complications of benign prostatic hyperplasia

* Urinary retention
* Bladder stones
* Urinary tract infection
* Acute and chronic haematuria
* Kidney damage

Therapeutic intervention of benign prostatic hyperplasia

* Alpha- blockers include: Alfuzosin (uroxatral), Doxazosin(caudra), Tamsulosin(Flomax) and Terazosin(Hytrin)

Surgeries for benign prostatic hyperplasia

* Transurethral resection of the prostate(TURP)
* Laser surgery
* Open prostatectomy
* Laparoscopic

Nursing management of benign prostatic hyperplasia

* The nurse should help relieve the acute urinary retention of the patient
* The nurse should promote comfort of the patient
* The nurse should help deal with the patient psychosocial concern
* The nurse should prevent complication for the patient
* The nurse should also help provide information about disease process/prognosis and treatment needs for the patient

Client teaching by the nurse for the benign prostatic hyperplasia

* The nurse should advice the patient to exercise regularly
* The nurse should avoid the patient to not drink too much alcohol or caffeine
* The nurse should advice the patient to let the bladder get too full before urinating
* The nurse should also advice the patient to not drink anything for an hour or two before bedtime

Prostrate cancer: Is a cancer that occurs in the prostrate .Prostrate cancer is one of the most common types of cancer in men. Usually prostrate cancer grows slowly and initially confined to the prostrate gland. Where it may not cause serious harm However while some types of the prostrate cancer grow slowly and may need minimal or even no treatment ,other types are aggressive and can spread quickly, Prostate cancer that is detected early when it is still confined to the prostate gland has a better chance of successful treatment

Pathophysiology of prostrate cancer

Prostrate cancer is an adenocarcinoma as it develops primarily from the glandular part of the organ and shows typical glandular patterns on microscopic examination. The cancer cells grow and begin to multiply initially spreading to the immediate surrounding of the prostrate tissue forming a tumor nodule.

Causes of prostrate cancer

It is not clear what causes prostate cancer. Doctors know the 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.

Signs and symptoms of prostate cancer

* Trouble urinating
* Blood in semen
* Bone pain
* Decreased force in the stream of the urine
* Discomfort in the pelvic area
* Erectile dysfunction

Prevention of prostrate cancer

* Choose a healthy diet of fruits and vegetables
* Maintain a healthy weight
* Exercise most days of the week
* Choose healthy foods over supplements

Risk factors of prostrate cancer

* Age
* Race
* Family history
* Obesity

Complications of prostrate cancer

* Incontinence
* Cancer that spreads
* Erectile dysfunction

Therapeutic intervention of prostrate cancer

Medication for prostrate cancer

* Abiraterone Acetate
* Apalutamide
* Bicalutamide
* Cabazitaxel
* Casodex
* Darolutamide

sSurgeries for prostrate cancer

Radiation therapy, Hormone therapy, Chemotherapy ,Cryotherapy, Active surveillance, Orchiectomy(surgery to remove the testicles)

**Nursing Management of prostrate**

* The nurse should make the patient comfortable
* The nurse should promote good nutrition for the patient
* The nurse should help improve body image and self- esteem for the patient
* The nurse should help render psychological support to the patient and family relation

**Client education by the nurse**

* The nurse should advice the patient to exercise regularly
* The nurse should advice the patient to not take too much alcohol
* The nurse should the patient to eat healthy foods
* The nurse should advice the patient to maintain his weight
* The nurse should advice the patient to choose a healthy diet of fruits and vegetables