**Name: james boluwatife adebomi**

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**300level**

**1. The different disorders of the prostrate gland**

The three most common forms of prostate disease are inflammation (prostatitis), non-cancerous enlargement of the prostate (benign prostatic hyperplasia, or BPH) and prostate cancer. A man may experience one or more of these conditions.

***Inflammation of the prostate (prostatitis***)

While prostatitis can affect men of any age, it is more common in younger men, aged between 30 and 50 years. The main types of prostatitis are:

• bacterial prostatitis – acute or chronic bacterial

• infection

• non-bacterial prostatitis – inflamed prostate, also known as chronic pelvic pain syndrome (CPPS).

In most cases, the cause of prostatitis is unknown. Bacterial prostatitis responds well to antibiotic drugs that can get into the prostate.

Non-bacterial prostatitis, or CPPS, is the most common form of prostatitis and is more difficult to manage. Symptoms vary from one man to another. There is no single test to diagnose CPPS, so your doctor will need to rule out other possible causes of your symptoms before making a diagnosis.

***Non-cancerous enlargement of the prostate (benign prostatic hyperplasia, or BPH)***

Non-cancerous enlargement of the prostate, or benign prostatic hyperplasia (BPH), is more common as men get older. It is not life threatening, but can significantly affect your quality of life.

The enlargement of the prostate gland (which surrounds the top of the urethra) causes the urethra to narrow, and puts pressure on the base of the bladder. This can lead to obstruction (blockage) in the flow of urine.

Obstructions usually show up as lower urinary tract symptoms that sometimes result in the urine staying in the bladder when it's supposed to be released. When this happens suddenly, it's called acute urinary retention. This is very painful and is usually relieved temporarily by inserting a thin tube (a catheter) to release the urine.

Chronic (ongoing) retention, which is less common, can lead to a dangerous, painless accumulation of urine in the bladder. An uncommon form of chronic urinary retention is associated with high bladder pressures, which can damage kidney function.

***Prostate cancer***

Prostate cancer typically affects men over the age of 50 years. Around 16,000 Australians are diagnosed every year. The cause remains unknown, although advancing age and family history are known to be contributing factors.

In the early stages, the cancer cells are confined to the prostate gland. With the more aggressive types of prostate cancer, cancer cells enter the vascular and lymphatic systems early and spread to other parts of the body where they develop secondary tumours, particularly in the bones.

**2.etiologies**

Causes of Inflammation of the prostate ( prostatitis)

The cause of prostate infection isn’t always clear. For chronic prostatitis, the exact cause is unknown. Researchers believe:

• a microorganism can cause chronic prostatitis

• your immune system is responding to a previous UTI

• your immune system is reacting to nerve damage in the area

For acute and chronic bacterial prostatitis, bacterial infections are the cause. Sometimes, bacteria can get into the prostate through the urethra.

You are at increased risk of prostate infection if you use a catheter or have a medical procedure involving the urethra. Other risk factors include:

• bladder obstruction

• infection

• sexually transmitted diseases (STDs)

• enlarged prostate or injury, which can encourage infection

non-cancerous enlargement of the prostate (benign prostatic hyperplasia, or BPH)

The prostate gland is located beneath your bladder. The tube that transports urine from the bladder out of your penis (urethra) passes through the center of the prostate. When the prostate enlarges, it begins to block urine flow.

Most men have continued prostate growth throughout life. In many men, this continued growth enlarges the prostate enough to cause urinary symptoms or to significantly block urine flow.

It isn't entirely clear what causes the prostate to enlarge. However, it might be due to changes in the balance of sex hormones as men grow older

￼Prostate cancer

Prostate gland

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It's not clear what causes prostate cancer.

Doctors know that 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. Some abnormal cells can also break off and spread (meta**stas**ize) to other parts of the body.

**3.The therapeutic interventions as well as surgeries**

The doctor will start by asking detailed questions about your symptoms and doing a physical exam. This initial exam is likely to include:

• Digital rectal exam. The doctor inserts a finger into the rectum to check your prostate for enlargement.

• Urine test. Analyzing a sample of your urine can help rule out an infection or other conditions that can cause similar symptoms.

• Blood test. The results can indicate kidney problems.

• Prostate-specific antigen (PSA) blood test. PSA is a substance produced in your prostate. PSA levels increase when you have an enlarged prostate. However, elevated PSA levels can also be due to recent procedures, infection, surgery or prostate cancer.

After that, your doctor might recommend additional tests to help confirm an enlarged prostate and to rule out other conditions. These tests include:

• Urinary flow test. You urinate into a receptacle attached to a machine that measures the strength and amount of your urine flow. Test results help determine over time if your condition is getting better or worse.

• Postvoid residual volume test. This test measures whether you can empty your bladder completely. The test can be done using ultrasound or by inserting a catheter into your bladder after you urinate to measure how much urine is left in your bladder.

• 24-hour voiding diary. Recording the frequency and amount of urine might be especially helpful if more than one-third of your daily urinary output occurs at night.

If your condition is more complex, your doctor may recommend:

• Transrectal ultrasound. An ultrasound probe is inserted into your rectum to measure and evaluate your prostate.

• Prostate biopsy. Transrectal ultrasound guides needles used to take tissue samples (biopsies) of the prostate. Examining the tissue can help your doctor diagnose or rule out prostate cancer.

• Urodynamic and pressure flow studies. A catheter is threaded through your urethra into your bladder. Water — or, less commonly, air — is slowly injected into your bladder. Your doctor can then measure bladder pressure and determine how well your bladder muscles are working. These studies are usually used only in men with suspected neurological problems and in men who have had a previous prostate procedure and still have symptoms.

• Cystoscopy. A lighted, flexible instrument (cystoscope) is inserted into your urethra, allowing your doctor to see inside your urethra and bladder. You will be given a local anesthetic before this test.

Tests and diagnosis at Mayo Clinic

Mayo Clinic specialists have experience diagnosing complex conditions involving enlarged prostate. You have access to the latest diagnostic testing, including urodynamic and pressure flow studies.

Treatment

A wide variety of treatments are available for enlarged prostate, including medication, minimally invasive therapies and surgery. The best treatment choice for you depends on several factors, including:

• The size of your prostate

• Your age

• Your overall health

• The amount of discomfort or bother you are experiencing

If your symptoms are tolerable, you might decide to postpone treatment and simply monitor your symptoms. For some men, symptoms can ease without treatment.

Medication

Medication is the most common treatment for mild to moderate symptoms of prostate enlargement. The options include:

• Alpha blockers. These medications relax bladder neck muscles and muscle fibers in the prostate, making urination easier. Alpha blockers — which include alfuzosin (Uroxatral), doxazosin (Cardura), tamsulosin (Flomax) and silodosin (Rapaflo) — usually work quickly in men with relatively small prostates. Side effects might include dizziness and a harmless condition in which semen goes back into the bladder instead of out the tip of the penis (retrograde ejaculation).

• 5-alpha reductase inhibitors. These medications shrink your prostate by preventing hormonal changes that cause prostate growth. These medications — which include finasteride (Proscar) and dutasteride (Avodart) — might take up to six months to be effective. Side effects include retrograde ejaculation.

Any type of prostate procedure can cause side effects. Depending on the procedure you choose, complications might include:

• Semen flowing backward into the bladder instead of out through the penis during ejaculation (retrograde ejaculation)

• Temporary difficulty with urination

• Urinary tract infection

• Bleeding

• Erectile dysfunction

• Very rarely, loss of bladder control (incontinence)

⁃ There are several types of minimally invasive or surgical therapies.

Transurethral resection of the prostate (TURP)

A lighted scope is inserted into your urethra, and the surgeon removes all but the outer part of the prostate. TURP generally relieves symptoms quickly, and most men have a stronger urine flow soon after the procedure. After TURP you might temporarily need a catheter to drain your bladder.

Transurethral incision of the prostate (TUIP)

A lighted scope is inserted into your urethra, and the surgeon makes one or two small cuts in the prostate gland — making it easier for urine to pass through the urethra. This surgery might be an option if you have a small or moderately enlarged prostate gland, especially if you have health problems that make other surgeries too risky.

Transurethral microwave thermotherapy (TUMT)

Your doctor inserts a special electrode through your urethra into your prostate area. Microwave energy from the electrode destroys the inner portion of the enlarged prostate gland, shrinking it and easing urine flow. TUMT might only partially relieve your symptoms, and it might take some time before you notice results. This surgery is generally used only on small prostates in special circumstances because re-treatment might be necessary.

Transurethral needle ablation (TUNA)

In this procedure, a scope is passed into your urethra, allowing your doctor to place needles into your prostate gland. Radio waves pass through the needles, heating and destroying excess prostate tissue that's blocking urine flow. TUNA may be an option in select cases, but the procedure is rarely used any longer.

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

**Inflammation (prostatitis)**

Nursing care assessment and physical examination

Take a careful history to elicit genitourinary symptoms. Generally, patients with suspected acute bacterial prostatitis have symptoms that are similar to those of a urinary tract infection: dysuria, frequency, urgency, and nocturia. In addition, patients report perineal pain radiating down to the sacral region of the back, down the penis and suprapubic area, and possibly into the rectal area. Hematuria or a purulent urethral discharge may be present. The patient may also complain of fever, chills, myalgia (muscle aches), arthralgia (painful joints), and malaise. Patients with chronic bacterial prostatitis are usually asymptomatic but complain of chronic cystitis.

Discuss the patient’s fear of sexually transmitted disease and impotence related to this illness. Assess the patient’s ability to cope with a painful, prolonged illness with a high probability of recurrence or chronicity. If the patient has chronic bacterial prostatitis, assess the patient’s and partner’s coping strategies and support systems.

* Most physicians prescribe antibiotic therapy based on the results of the bacterial cultures; sometimes parenteral antibiotics are required if the infection is systemic. Bedrest and local measures such as 20-minute sitz baths two or three times a day can assist in reducing pain. Regular sexual intercourse or ejaculation helps drainage of prostatic secretions and lessens infection and pain after the acute inflammation subsides. For acute episodes, and once antibiotics have been started, some physicians recommend regular prostatic massage for several weeks.

**Benign prostatic hyperplasia**:

. Urinary Retention

. Acute Pain

. Fear/Anxiety

. Urinary Retention: Incomplete emptying of the bladder.

May be related to

• Mechanical obstruction; enlarged prostate

• Decompensation of detrusor musculature

• Inability of bladder to contract adequately

Possibly evidenced by

• Frequency, hesitancy, inability to empty bladder completely; incontinence/dribbling

• Bladder distension, residual urine

Desired Outcomes

• Void in sufficient amounts with no palpable bladder distension.

• Demonstrate postvoid residuals of less than 50 mL, with absence of dribbling/overflow.

2. Acute Pain

Acute Pain: Unpleasant sensory and emotional experience arising from actual or potential tissue damage or described in terms of such damage; sudden or slow onset of any intensity from mild to severe with anticipated or predictable end and a duration of <6 months.

May be related to

• Mucosal irritation: bladder distension, renal colic; urinary infection; radiation therapy

• Possibly evidenced by

• Reports of pain (bladder/rectal spasm)

• Narrowed focus; altered muscle tone, grimacing; distraction behaviors, restlessness

• Autonomic responses

Desired Outcomes

• Report pain relieved/controlled.

• Appear relaxed.

• Be able to sleep/rest appropriately.

3. Fear/Anxiety

Anxiety: Vague uneasy feeling of discomfort or dread accompanied by an autonomic response.

Fear: Response to perceived threat that is consciously recognized as a danger.

May be related to

• Change in health status: possibility of surgical procedure/malignancy

• Embarrassment/loss of dignity associated with genital exposure before, during, and after treatment; concern about sexual ability

Possibly evidenced by

• Increased tension, apprehension, worry

• Expressed concerns regarding perceived changes

• Fear of unspecific consequences

Desired Outcomes

• Appear relaxed.

• Verbalize accurate knowledge of the situation.

• Demonstrate appropriate range of feelings and lessened fear.

• Report anxiety is reduced to a manageable level.

**Prostate cancer**

Here are (3) nursing care plans (NCP) and nursing care plan for prostatectomy:

0. Impaired Urinary Elimination

0. Risk for Deficient Fluid Volume

0. Risk for Infection

1. Impaired Urinary Elimination

Impaired Urinary Elimination: Disturbance in urinary elimination.

May be related to

• Mechanical obstruction: blood clots, edema, trauma, surgical procedure

• Pressure and irritation of catheter/balloon

• Loss of bladder tone due to preoperative overdistension or continued decompression

Possibly evidenced by

• Frequency, urgency, hesitancy, dysuria, incontinence, retention

• Bladder fullness; suprapubic discomfort

Desired Outcomes

• Void normal amounts without retention.

• Demonstrate behaviors to regain bladder/urinary control.

2. Risk for Deficient Fluid Volume

Risk for Deficient Fluid Volume: At risk for decreased intravascular, interstitial, and intracellular fluid.

Risk factors may include

• Vascular nature of surgical area; difficulty controlling bleeding

• Restricted intake preoperatively

• Postobstructive diuresis

Possibly evidenced by

• Not applicable. A risk diagnosis is not evidenced by signs and symptoms, as the problem has not occurred and nursing interventions are directed at prevention.

Desired Outcomes

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3. Risk for Infection

Risk for Infection: At increased risk for being invaded by pathogenic organisms.

Risk factors may include

• Invasive procedures: instrumentation during surgery, catheter, frequent bladder irrigation

• Traumatized tissue, surgical incision (e.g., perineal)