PROSTATE DISORDERS

These are known as disorders that affect the prostate gland. The most common prostate disorders are

1.**Prostatitis**

**It is the i**nflammation of the prostate gland, which can occur any time after puberty.

**Features- include** recurrent urinary tract infections, epididymitis, Benign prostatic hypertrophy, urethritis, prostatic carcinoma, Diabetes mellietus, immunocompromised status, urethral strictures and bladder neck hypertrophy.

It may be chronic or a single acute episode. The inflammation causes the prostate gland to swell, resulting in pain, especially when standing.

It may eventually lead to difficulty in passing urine as a result of an inward squeezing of the urethra that causes a mild obstruction

**Aetiology:**

There are **three basic types** of prostatitis:

**Acute bacterial**,

**Chronic bacterial**

**Nonbacterial-** Non-bacterial prostatitis includes the increased content of creatinine, urate and white blood cells due to reflux into the prostatic ducts. These agents can act as chemical agents leading to an inflammatory response.

Bacterial prostatitis is most common in older men which results in oedema and inflammation of all or part of the prostate gland, the bacteria primarily responsible for the infection are gram-negative organisms such as ***Escherichia coli****; however,* gram-positive and **gonococcal bacteria** may also play a part.

The prostate gland may become infected by:

-Bacteria ascending the urethra. Ascending infection from the urethra and the chemical damage secondary to the reflux of urine through the prostatic and ejaculatory ducts.

-Infected urine refluxing from the bladder into the prostatic ducts.

-Bacteria in the blood or lymph supply to the glands, Surgical instrumentation or other forms of urethral trauma.

-accompanied with some symptoms especially: Complaints of urgency, frequency, hesitancy and dysuria.

**Therapeutic Interventions**-The preferred treatment is trimethoprim and sulfamethoxazole (Bactrim) for 30 days

Other antibiotics, include:

-Fluoroquinolones (ciprofloxacin, ofloxacin), may be used for chronic prostatitis

-Other forms of treatment may include anti-inflammatory agents,Stool softeners, warm sits baths, prostatic massage .

-Diet changes such as decreasing spicy foods and alcohol

-In some cases, prostate surgery is necessary to remove the obstruction.

**CLINICAL EDUCATION**

Teach patient the causes, prevention and treatment e.g

1. Risk factors such as the use of indwelling urinary catheters, poor hygiene or risky sexual practices.
2. Excessive intake of bladder irritants such as alcohol, Ignoring signs of UTIs and poor compliance with the antibiotic treatment plan.
3. Encourage the patient to wash his hands and sits bath equipment before and after each treatment.
4. Fluids such as water and cranberry juice should be encouraged up to 2500 to 3000 mL per day unless contraindicated.
5. Bladder irritants in the form of caffeine products (e.g., coffee, tea, cola, and chocolate), citrus juices and alcohol should be taken in very limited amounts
6. Encourage the patient to empty his bladder every 2 to 3hours even if he does not feel the urge to urinate
7. Regular and complete emptying of the bladder to prevent urinary tract infection (UTI)

8. Avoiding excess alcohol (more than 2 to 3 oz per day—alcohol is a bladder irritant)

9.Avoiding certain high-risk sexual practices

10.Avoiding contamination of the urinary tract

2. BENIGN PROSTATIC HYPERPLASIA(BPH)

It is the enlargement of the prostate gland is a normal process in older men which begins at about age 50 and happens in 75% of men older than age 70.

Benign prostatic hyperplasia (BPH) is a non-malignant growth of the prostate that gradually causes urinary obstruction.

According to current studies, BPH does not increase a man’s risk of developing cancer of the prostate.

**Aetiology:**

There is no known cause of BPH other than normal aging, some men think they may have caused the problem by certain sexual practices; however, there is no scientific proof at this time.

Some factors that are being investigated in research studies are high-fat diet, ethnic background and lifestyle issues.

If the patient has no symptoms or only mild ones, the most current medical approach is “watchful waiting”, the healthcare provider watches for any increase in symptoms or signs that the urethra is becoming obstructed.

Alpha-adrenergic antagonists are medications that relax the smooth muscles, such as

-Tamsulosin (Flomax), terazosin (Hytrin), and doxazosin (Cardura).

-These medications are also used to treat high blood pressure.

-The most used medications to block the action of the male hormone in the prostate gland are finasteride (Proscar) and dutasteride (Avodart).

-Treatment of symptoms may include use of a catheter (indwelling or intermittent).

-Oral fluids.

-Antibiotics for UTI

Conservative medical treatment includes the use of medication to either relax the smooth muscles of the prostate and bladder neck or block the male hormone to prevent or shrink tissue growth, EG: Alpha-blockers, testosterone blockers.

**Nonsurgical Intervention:** Transurethral microwave antenna (TUMA), prostatic balloon, prostatic stents may be used to open the passageway for urine to flow more freely.

**SURGICAL INTERVENTION:**

**1. Transurethral incision of the prostate (TUIP):** It uses surgical incisions into the gland to relieve obstruction.

**2.TRANSURETHRAL RESECTION OF THE PROSTATE:** During the past 50 years, transurethral resection of the prostate (TURP) has been the surgical treatment used most often to relieve obstruction caused by an enlarged prostate.

Several other transurethral options also exist:

-transurethral ultrasound-guided

-laser-induced prostatectomy (TULIP): uses laser to relieve obstruction

-For TURP, the patient is anesthetized and the

surgery is performed using an instrument called a **Resectoscope.**

**3.Radical Prostatectomy**: When the prostate gland is very large, is causing obstruction, or iscancerous, a radical prostatectomy is performed to remove the entire prostate gland.

**4.Open Prostatectomy:**

Several approaches may be taken during traditional radical surgery, approaches such as:

Suprapubic Approach,an incision is made through the lower abdomen into the bladder

The gland is removed, and the urethra is reattached to the bladder.

The Retropubic Approach is similar except there is no incision into the bladder.

A perineal prostatectomyinvolves making an incision between the scrotum and anus and removing the gland this procedure is rarely done because of the increased risk of contamination of the incision (close to the rectum), and risk of urinary incontinence, erectile dysfunction, or injury to the rectum.

**NURSING CARE:**

-An open prostatectomy means a longer hospital stay compared with other BPH surgeries.

-A suprapubic catheter and care for an abdominal incision increase the length of stay and the risk for complications .

-Follow-up home care for wound dressing changes and catheter care is an important aspect of nursing interventions for these patients.

CLIENT EDUCATION

- Educate patient not to let bladder get too full. Urinate when you feel the urge, but try to go every 2-3hours.

-Inform patient to avoid drinking of too much alcohol or drinks containing caffeine, which may irritate your bladder.

-Avoid over-the-counter medicines without checking with your healthcare provider. Some medicines, such as decongestants and antihistamines, make urinating difficult.

- educate on the need to exercise, for 30 minutes a day.

3. PROSTATE CANCER

Prostate cancer typically affects men over the age of 50years. A small walnut-shaped gland in men that produces the seminal fluid that nourishment and transports sperm. Most common in men. It usually grows slowly and is initially confined to the prostate gland where it may not cause serious harm.

**ETIOLOGY**

It is not clear what causes prostate cancer, doctors know that prostate cancer begins when some cells in your prostate become abnormal. Mutation in the abnormal cells’ DNA cause cells to grow and divide more rapidly than normal cells do. The abnormal cells continue living, when other cells would die. The abnormal cells form a tumour that can grow to invade nearby tissue. Some abnormal cells can also break off and spread (metastasize) to other part of the body.

Risk factors include: age, race, family history, obesity.

**THERAPEUTIC INTERVENTIONS AND SURGERIES.**

All patients diagnosed with prostate cancer will have a review of their medical history. Histology and imaging that has been performed.

-Active surveillance: It is recommended for men with low-risk localised prostate cancer; they also have the choice of radical prostatectomy or radical radiotherapy. The aim of active surveillance is early detection of disease progression, so treatment can be provided while the disease is still curable. Patients avoid the risk of side-effects until necessary, and some never need treatment. One of the main disadvantages is anxiety.

-Radical prostatectomy:

Removal of the prostate gland and seminal vesicles aims to cure prostate cancer. It is a major operation and offered only to men who are fit and have no other health conditions.

Histological examination of the prostate gland can show whether cure has been achieved. If all affected tissue has been removed, PSA will be undetectable on blood tests. If histology or PSA surveillance demonstrates that there is disease progression following prostatectomy, salvage radiotherapy may be possible.

The disadvantages of surgery include potential complications such as pulmonary embolism. Long-term urinary incontinence and erectile dysfunction may be minimised by nerve-sparing techniques during surgery, or treatment with pelvic floor exercises, medication, further surgery or a combination of these .

**External-beam radical radiotherapy:**

External-beam radiotherapy may be offered at any stage of disease. It can be used to cure localised prostate cancer, to improve disease control for locally advanced prostate cancer and/or for pain control in metastatic prostate cancer.

CT and MRI scans are performed before treatment so the radiotherapy beam is targeted precisely to the size and shape of the area to be treated. Shields are used to protect surrounding healthy tissues and reduce the risk of damaging nearby organs including the bladder and bowel.

**Hormone therapy** is recommended for men with intermediate or high-risk prostate cancer .Hormone therapy and radiotherapy in combination increase the time before disease progresses and overall length of survival, compared with radiotherapy or hormone therapy alone. It is thought that hormone therapy causes the volume of prostate cancer to shrink, making it more sensitive to radiotherapy.

**Brachytherapy**

Permanent seed brachytherapy is a form of radiotherapy. It is an option for men with low-risk localised prostate care whose prostate gland volume is <50ml .

TRUS (without biopsy) is used to measure prostate volume and shape, and place radioactive seeds in the prostate gland through the perineum. The seeds remain radioactive for up to 10 months. Their half-life is 60 days, so men are advised to avoid prolonged contact with children and pregnant women for two months. Due to a risk of seeds being discharged in semen, they are advised to wear a condom for the first three ejaculations.

The advantage of permanent seed brachytherapy is the radiation dose is confined to the prostate, reducing the risk of damage to other organs. However, swelling of the prostate caused by the procedure means around 5% of men develop urine retention requiring catheterisation. About 1% of these will need transurethral resection of the prostate, which will need to be deferred for one year so the seeds treatment can be completed and for any other side-effects to resolve

For men with intermediate or high-risk prostate cancer, high-dose brachytherapy in combination with external beam radiotherapy should be considered, as research suggests this combination may improve overall survival.

High-dose brachytherapy is delivered in a similar fashion to permanent seed brachytherapy, but the dose is implanted into the prostate contained in tubes. It is monitored until the correct dose is reached; the tubes are then removed so patients do not need to take precautions following treatment.

**Hormone therapy**

Hormone therapy, also called androgen deprivation therapy, is given to treat metastatic prostate cancer or in combination with external beam radiotherapy for localised or locally advanced prostate cancer.

The aim of hormone therapy is to block the production of androgens, including testosterone, upon which most prostate cancers depend for growth. Hormone therapy includes bilateral subcapsular orchidectomy (BSO) (removal of the testes), injections or tablets.

**Watchful waiting**

Like active surveillance, watchful waiting involves deferring treatment until necessary, although the aim is disease control rather than cure. It is recommended to men with prostate cancer that is unlikely to affect their life expectancy.

Treatment, usually hormone therapy, is started when they develop symptoms of disease progression.

**NURSING CARE AND CLINICAL TEACHING:**

**PREOPERATIVE CARE:**

During the preoperative period, when patients must come to terms with the indication for prostatectomy, nurses should encourage them to express their feelings and allow an exchange of information facilitating the planning of a high-quality nursing intervention.

The information offered by nurses in the preoperative period is usually related to routine surgical procedures, such as skin preparation, fasting, time of surgery, and use of bladder catheters.

**POSTOPERATIVE CARE:**

After treatment, nurses need to assess patients for side-effects and offer formal assessment and treatment for troubling symptoms. Patients should be asked regularly whether their side-effects

are troubling, as their views and quality of life may change over the years.

Treatments for prostate cancer affect masculinity, as side-effects include erectile dysfunction, testicular shrinkage, breast development and loss of strength. While some men joke about their feminisation, this may mask psychological distress. Nurses should be alert to cues and offer patients referral to professionals for help with psychosexual issues.

REFERENCES: Article: Acupuncture combined with tamsulosin hydrochloride sustained-release capsule in the treatment of...

Article: Re: Sex Hormones and Oxidative Stress Mediated Phthalate-Induced Effects in Prostatic...

Article: Effect of acupoint therapies on prostatitis: A systematic review protocol.

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Held J.L.

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