LESSON ASSIGNMENT

LESSON 1
Diseases/Disorders of the Genitalia.

LESSON ASSIGNMENT
Paragraphs 1-1 through 1-10.

LESSON OBJECTIVES
After completing this lesson, you will be able to:

1-1. Identify the definition and etiology that apply to each of the genital diseases or disorders listed below:

- Prostatitis
- Epididymitis
- Varicocele
- Orchitis
- Testicular torsion
- Priapism
- Phimosis
- Paraphimosis
- Vaginitis

1-2. Identify the signs/symptoms and treatment that apply to the diseases and disorders of the genitalia listed above.

SUGGESTIONS
After completing the assignment, complete the exercises of this lesson. These exercises will help you to achieve the lesson objectives.
LESSON 1
DISEASES/DISORDERS OF THE GENITALIA

Section I. DISEASES/DISORDERS OF THE MALE GENITALIA

1-1. INTRODUCTION

Diseases and disorders of the genitalia can be dangerous. Such problems are generally agreeable to therapy if the diagnosis can be established. In your later work, you may be assessing and treating these types of diseases and disorders almost on a daily basis.

1-2. PROSTATITIS

The condition prostatitis is an inflammation of the prostate gland. Prostatitis can be divided into two main categories: (1) acute and chronic bacterial prostatitis and (2) nonbacterial prostatitis. The incidence of prostatitis increases with age.

a. **Etiology.** Bacterial prostatitis is either acute or chronic and is usually caused by gram-negative organisms such as these: Escherichia coli (most common), Enterobacter, Serratia, Klebsiella, and Pseudomonas. The causative bacterial may reach the prostate gland from the blood stream or from the urethra. Prostatitis is commonly associated with urethritis or an infection of the lower genitourinary tract (an infection such as gonorrhea). Systemic dehydration can play an important part in decreased urinary output. This decreased urinary out put allows microorganisms in the genitourinary tract to multiply.
b. **Signs and Symptoms.** Included are the following:

(1) Burning on urination.

(2) Pain in the perineum, rectum, lower back and abdomen, glans of the penis.

(3) Chills and moderate to high fever.

(4) Dysuria, polyuria, hematuria.

(5) Urethritis.

(6) Urethral discharge (clear viscous to milk white discharge).

(7) Prostate enlarged, boggy, and very tender.

**NOTE:** In the condition chronic prostatitis, there may be no symptoms.

c. **Treatment.** Follow these steps.

(1) Bed rest.

(2) Balanced fluid intake.
(3) Drug therapy. Included are the following:

(a) Analgesic drugs for pain.

(b) Trimethoprim (80 mg) twice a day for 30 days OR

(c) Sulfamethoxazole (400 mg) twice a day for 30 days.

(d) For sulfa sensitive patients:

1. Gentamicin sulfate (Garamycin®).

2. Ampicillin (Polycillin®).

(4) Culture and sensitivity test of urine. This test can determine the specific drug that will combat the infection.

NOTE: Treatment will depend on the type of prostatitis present--acute or chronic bacterial prostatitis or nonbacterial prostatitis.

(5) Neither the patient nor the physician should massage or milk the penis.

d. Special Considerations.

(1) Be sure the patient understands that bed rest and adequate hydration are necessary. He may need stool softeners and sitz baths, as ordered by the doctor.

(2) Be sure the patient knows that he must take the prescribed drugs faithfully.

(3) It is important for him to know that he must drink at least eight glasses of water a day.

(4) Tell the patient to report immediately signs of possible adverse reaction to drugs, signs such as rash, nausea, vomiting, fever, chills, and gastrointestinal irritation.
1-3. EPIDIDYMITIS

Epididymitis is an inflammation of the epididymis. The epididymis is the comma-shaped organ which lies along the posterior border of each testicle. Each epididymis consists mostly of a tightly coiled tube, the ductus epididymis. The function of the ductus epididymis is to (1) store sperm for maturation and (2) to propel the matured sperm toward the urethra during ejaculation (sperm is propelled by contraction of the smooth muscle of the epididymis). The condition epididymides is one of the most common infections of the male reproductive tract. Care must be taken to treat this infection. Untreated, this infection may spread to the testicle itself causing orchitis (inflammation of the testis). If the condition spreads to both testicles, the patient may become sterile. Epididymitis is common in males under thirty but rarely occurs before puberty.

a. **Etiology.** Included are the following:

(1) Severe straining.
(2) Prolonged standing.
(3) Prolonged catheterization (instrumentation).
(4) Chronic prostatitis (inflammation of the prostate gland).
(5) Chronic urethritis (inflammation of the urethra).
(6) History of previous instrumentation.

![Figure 1-3. Area of epididymitis.](image)
b. **Signs and Symptoms.** Included are the following:

1. Fever and pain in the scrotum.
2. Rapid unilateral swelling of the scrotum. (The scrotal sac is usually slightly swollen and a dusky red). The testes are normal.
3. A marked tenderness over the spermatic cord, a tenderness which is relieved by lifting the testes (abnormal epididymis).
4. Pyuria (pus in the urine).
5. Bacteriuria (bacteria in urine).

**NOTE:** The problem may involve the testis and/or the entire spermatic cord.

c. **Treatment.** There are three main goals in treating epididymitis: reduce the pain, reduce the swelling, and combat infection. Begin treatment immediately since sterility is always a threat. Treat as follows:

1. In males less than 30 years of age, torsion of the testicle should first be ruled out.
2. In more severe cases, antibiotics such as tetracycline may be used. In men over 35 years of age, *E. coli* is the most frequent causative organism. For these patients, trimethoprim-sulfamethoxazole, ampicillin, or a cephalosporin should be used.
3. Scrotal support, for a week to 10 days.
4. Scrotal ice packs.
5. Sitz baths, 2 to 3 times a day.
6. Rest and sedation.
7. Avoidance of straining and sexual excitement.

---

**1-4. VARICOCELE**

Within the spermatic cord, there is a network of veins referred to as the pampiniform plexus. A varicocele is an abnormal dilation of these veins. In physical examination, these veins feel like "a bag of worms."
a. **Signs and Symptoms.** Some cases may have no symptoms. For other patients, these signs and symptoms will be evident:

1. **Dragging scrotal sensation.** The chief complaint will be that the patient feels the scrotum is heavy.

2. **Possible subfertility.** Sperm travel from the vas deferens to the seminal vesicles may be hindered.

3. **Diagnosis may be made by palpation/transillumination of the scrotum.** The twisted mass of veins can be felt. The scrotum will not transilluminate (light will not pass through the scrotum).

b. **Treatment.** If there are no signs or symptoms, the condition is best left along. If the patient has symptoms, refer him to the medical facility for treatment and possible surgical correction.

### 1-5. ORCHITIS

Orchitis is an infection of the testicles, a very painful, serious complication of epididymitis. Mumps may also cause the infection orchitis. Other causes or orchitis include a systemic infection, testicular torsion, or severe trauma.

![Figure 1-4. Area of orchitis.](image)
a. **Signs and Symptoms.** Included are the following:

(1) Swollen, painful, tender testes.

(2) Redness and edema of the scrotum.

(3) Fever and prostration.

b. **Treatment.** Follow this treatment:

(1) Bed rest.

(2) Elevate and support the testes. Rolled towels may be used to elevate the testes.

(3) Treat the underlying cause by antibiotic therapy, if appropriate. Hot and cold compresses may be applied for symptomatic relief.

**1-6. TESTICULAR TORSION**

Testicular torsion may be defined as an abnormal twisting of the testes on its spermatic cord. This condition may be spontaneous (occurring for no reason) or may follow strenuous activity. The condition may occur at any age but is most common between the ages of 12 and 18.

a. **Signs and Symptoms.** Included are the following:

(1) Extreme local pain.

(2) Nausea and vomiting.

(3) Scrotal edema and fever.

b. **Treatment.** Refer the patient to a physician immediately. Torsion must be differentiated from inflammatory conditions within the scrotum, trauma, and testicular tumor. If doubt exists, surgical intervention is advised. Without surgery, the abnormal twisting may stop the blood flow to the testicle causing necrosis and gangrene.

**1-7. PRIAPISM**

This condition can be defined as an abnormal, painful, and continuous erection of the penis unaccompanied by sexual desire.
a. **Etiology.** Included are the following:

(1) Pelvic vascular thrombosis.

(2) Leukemia.

(3) Sickle cell disease (red cells roughen, becoming sickle-shaped resulting in chronic ill health).

(4) Pelvic injuries.

(5) Inflammation or infection of the genitalia.

b. **Signs and Symptoms.** As noted in the definition:

(1) Continuous erection unaccompanied by sexual desire.

(2) Pain.

c. **Treatment.** Refer the patient to a physician for assessment of the underlying cause and symptomatic treatment.

1-8. **PHIMOSIS/PARAPHIMOSIS**

*Phimosis* is a tightness of the foreskin so that it cannot be pulled back over the penis. *Paraphimosis*, on the other hand, is a tightness of the foreskin which, once the foreskin has been pulled back, will not allow the foreskin to return to its normal position over the glans. In either case signs of infection may be present. Treatment may be either circumcision or preliminary dorsal slit.

**Section II. DISEASES/DISORDERS OF THE FEMALE GENITALIA**

1-9. **VAGINITIS**

Vaginitis is inflammation of the vagina.

a. **Etiology.** Vaginitis is a common gynecologic disorder which is characterized by a distressing, often whitish, non-bloody discharge due to inflammation of the vagina. In adults, the vaginal discharge is usually secondary to an infection of the lower reproductive tract. Protozoa, notably *Trichomonas vaginalis*, are responsible for one third of the vaginitis cases. *Candida albicans* is a type of fungus which is a frequent cause of vaginitis in women who are either pregnant or who are diabetic. Other causes of vaginitis include bacteria, such as *Escherichia coli*, Staphylocci, and foreign bodies.
b. **Signs and symptoms.** Signs and symptoms vary with the cause of the infection.

1. In bacterial infections, the discharge is yellow to gray and frothy with a foul odor. Many white blood cells are contained in the discharge.

2. In trichomonal vaginitis, the discharge is yellow-green, frothy, and has a foul odor. There may be red "strawberry" lesions on the cervix.

3. In candida vaginitis, the discharge is usually white and thin with curd-like flecks. The discharge has a moldy odor.

c. **Treatment.** Treatment also varies according to the cause of the infection.

1. **Bacterial origin caused by E Coli and many other gastrointestinal bacteria.** Treat as follows:

   (a) Sulfathiazole (Sultrin Triple Sulfa Cream or povidone-iodine, Betadine Vaginal Gel®) applied with an applicator.

   (b) Systemic antibiotics may be required.

2. **Parasitic origins caused by trichomoniasis.** Use metronidazole (Flagyl®) to treat males and females. Adverse reactions include gastrointestinal problems such as stomatitis, nausea, vomiting, and diarrhea. Other adverse reactions include a sharp metallic, unpleasant taste. DO NOT use alcohol for at least 72 hours after completing Flagyl® therapy. The drug dosage and the length of treatment vary from 1 day (2 grams in one or two doses) to 10 days (250 mg three times a day).
(3) **Fungal origins caused by Candida albicans.** Give miconazole (Monistat®) cream and vaginal suppositories for the treatment of vaginal candidiasis. The dosage should be intravaginally for 7 days. If needed, the dosage may be repeated. Adverse reactions to this cream include burning, itching, or irritation to the vaginal area. Discontinue use of the medication if hives or skin irritation occur. To treat Candida albicans, give mycostatin (Nystatin®) cream, ointment, tables, and topical powders. These can be used for the skin, the genitourinary tract, and mucous membranes, as appropriate.

**NOTE:** Nystatin® is not suitable for treating systemic infections because Nystatin® is too toxic for parenteral use. Additionally, this medication is not absorbed from the genitourinary tract.

(4) **Recurrent or relapsing infection.** Treat as follows:

(a) Control or eliminate the systemic factors.

(b) Eradicate intestinal source if the infections is caused by the migration of fecal flora to the perineum.

(c) Sexual partner may need to use condoms.

1-10. **CLOSING**

Diseases and disorders of the genitalia are very common and with practice you will become proficient in recognizing these problems. Recognition is probably the most important step with these diseases. If diseases or disorders of the genitalia go unrecognized and, therefore, untreated, they may spread to other parts of the body, possibly causing much greater problems.
EXERCISES, LESSON 1

INSTRUCTIONS: Answer the following exercises by marking the lettered response that best answers the question or best completes the incomplete statement or by writing the answer in the space provided.

After you have completed all the exercises, turn to "Solutions to Exercises" at the end of the lesson and check your answers. For each exercise answered incorrectly, reread the material referenced with the solution.

1. Inflammation of the prostate, acute or chronic, is termed ___________________.

2. List four signs/symptoms of prostatitis.
   a. ____________________________
   b. ____________________________
   c. ____________________________
   d. ____________________________

3. Treatment for prostatitis includes bed rest, balanced fluid intake (8 glasses of fluid per day), and drug therapy to include ___________________ for pain.

4. Epididymis is an infection of the epididymis which is the ___________________
   ________________________________

5. Name three possible causes of epididymitis.
   a. ________________________________
   b. ________________________________
   c. ________________________________
   a. _____________________________________________.
   b. _____________________________________________.
   c. _____________________________________________.
   d. _____________________________________________.

7. The main goals for treatment of epididymitis are _________________________,
   reduce the swelling, and _________________________.

8. _________________________ is a scrotal condition in which the veins in the
   scrotum and above the testes become dilated, elongated, and twisted.

9. The chief complaint of a patient suffering from the condition defined in test #8 is
   _________________________.

10. Causes of the painful and serious condition orchitis include systemic infection,
    severe trauma, testicular torsion, and _________________

11. What is testicular torsion? _________________
    _________________

12. Priapism is _________________
    _________________

13. _________________________
13. Three causes of priapism are:
   a. __________________________.
   b. __________________________.
   c. __________________________.

14. A foreskin so tight that it cannot be pulled back over the penis is the definition of the condition ____________________________.

15. __________________________, on the other hand, is a tightness of the foreskin which will not allow the foreskin to fall back to its normal position once it has been pulled back over the penis.

16. What is vaginitis? ____________________________

17. The three types of vaginitis infections are ____________ infections, ____________ vaginitis, and ________________ vaginitis.

18. Signs/symptoms of __________________________ vaginitis include a discharge that is green-tinged, thin, and bubbly with a foul odor.

   Check Your Answers on Next Page
SOLUTIONS TO EXERCISES, LESSON 1

1. Prostatitis. (para 1-2)

2. Your are correct if you listed any four of the following:
   
   Burning on urination. Dysuria.
   Pain in the perineum, rectum, Polyuria.
   lower back and abdomen, glans Hematuria.
   of the penis. Urethritis.
   Chills and moderate to high Urethral discharge.
   fever. Enlarged, boggy, verytender prostate.

   (paras 1-2b(1) through (7))

3. Analgesics. (para 1-2c(3)(a))

4. Cordlike excretory duct of the testicle. (para 1-3)

5. You are correct if you listed any three of the following:
   
   Severe straining. Chronic prostatitis.
   Prolonged standing. Chronic urethritis.
   Prolonged catheterization. History of previous instrumentation.

   (paras 1-3a(1) through (6))

6. You are correct if you listed any four of the following:
   
   Fever and pain in the scrotum. Pyuria.
   Rapid lateral swelling of the Bacteriuria.
   scrotum. Bloody ejaculate.
   Marked tenderness over the (para 1-3b(1) through (6))
   spermatic cord.

7. Reduce the pain.
   Combat the infection. (para 1-3c)

8. Varicocele. (para 1-4)

9. There is a sensation that the scrotum is dragging. (para 1-4a(1))

10. Mumps. (para 1-5)
11. Testicular torsion is an abnormal twisting of the testes on its spermatic cord.  
(para 1-6)

12. An abnormal, painful, and continuous erection of the penis, unaccompanied by sexual desire.  
(para 1-7)

13. You are correct if you listed any three of the following:

Pelvic vascular thrombosis.  
Leukemia.  
Sickle cell disease.  
Pelvic injuries.  
Infection of the genitalia.  
Inflammation of the genitalia.  

(paras 1-7a(1) through (5))

(para 1-8)

15. Paraphimosis.  
(para 1-8)

16. Vaginitis is inflammation of the vagina.  
(para 1-9)

17. Bacterial.  
Trichomonal.  
Candida.  
(paras 1-9b(1) through (3))

18. Trichomonal.  
(para 1-9b(2))

Return to Table of Contents