

Diseases of genital tract including STIs , PID

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Objectives :

By the end of this lecture the student will be able to :

- ❖ **Define STIs , PID .**
- ❖ **Explain etiology , risk factors , diagnosis and treatment of each one .**
- ❖ **Discuss nursing management of each topic .**

Sexual Transmitted Infections :

Sexual transmitted infections :

- **Are infections of the reproductive tract caused by microorganisms transmitted through vaginal, anal, or oral sexual intercourse .**
- **May contribute to cervical cancer, low birthweight, fetal wastage (abortions and death) and vertical transmission (maternal-to-fetal transmission while in utero), infertility, ectopic pregnancy, chronic pelvic pain, and death.**

CDC classifications of sexually transmitted infections :

❖ Infections characterized by vaginal discharge :

- 1. Vulvovaginal candidiasis**
- 2. Trichomoniasis**
- 3. Bacterial vaginosis**

❖ Infections characterized by cervicitis :

- 1. Chlamydia**
- 2. Gonorrhea**

Count...

❖ **Infections characterized by genital ulcers :**

1. Genital herpes simplex

2. Syphilis

❖ **Pelvic inflammatory disease (PID)**

❖ **Human immunodeficiency virus (HIV)**

Count...

- ❖ **Human papillomavirus infection (HPV)**
- ❖ **Vaccine-preventable STIs**
 - 1. Hepatitis A**
 - 2. Hepatitis B**

Infections Characterized by Vaginal Discharge :

1. Vulvovaginal candidiasis :

- **Is one of the most common causes of vaginal discharge .**
- **It is also referred to as yeast and a fungal infection.**

Clinical Manifestations :

- 1. Pruritus**
- 2. Vaginal discharge (thick, white, curd-like)**
- 3. Vaginal soreness**
- 4. Vulvar burning**
- 5. Erythema in the vulvovaginal area**

Predisposing factors :

- 1. Pregnancy**
- 2. Use of oral contraceptives with a high estrogen content**
- 3. Use of broad-spectrum antibiotics**
- 4. Diabetes mellitus**
- 5. Use of steroid and immunosuppressive drugs**
- 6. HIV infection**

Diagnosis :

- **The diagnosis of candidiasis is based on the history of symptoms and a pelvic examination. The speculum examination will reveal white plaques on the vaginal walls.**



Vulvovaginal candidiasis.



Treatment :

➤ **Treatment of candidiasis includes one of the following medications:**

- **Miconazole cream or suppository**
- **Clotrimazole tablet**
- **Terconazole cream or suppository**
- **Fluconazole oral tablet**

2. Trichomoniasis :

- Is another common vaginal infection that causes a discharge. The woman may be markedly symptomatic or asymptomatic.
- *Trichomonas vaginalis* is an ovoid shaped, single-cell protozoan parasite that can be observed under the microscope .



Clinical Manifestations and Diagnosis:

1. A heavy yellow/green or gray frothy or bubbly discharge
2. Vaginal pruritus and vulvar soreness
3. Dysuria

➤ **Diagnosis :**

The diagnosis is confirmed when a motile flagellated trichomonad is visualized under the microscope.

Treatment :

- **A single dose of oral metronidazole for both partners is a common treatment for this infection.**
- **Clients should be instructed to avoid sex until they and their sex partners are cured**

3. Bacterial Vaginosis :

- **A third common infection of the vagina is bacterial vaginosis, caused by the gram-negative bacillus *Gardnerella vaginalis*.**
- **Bacterial vaginosis is a sexually associated infection characterized by alterations in vaginal flora in which Lactobacilli in the vagina are replaced with high concentrations of anaerobic bacteria.**

Clinical Manifestations :

- The primary symptoms of bacterial vaginosis are a thin, white homogeneous vaginal discharge and characteristic “stale fish” odor.



Diagnosis :

- **To diagnose BV, three of the four criteria must be met:**
 - 1. Thin, white homogeneous vaginal discharge**
 - 2. pH > 4.5**
 - 3. Positive “whiff test” (secretion is mixed with a drop of 10% potassium hydroxide on a slide, producing a characteristic stale fishy odor)**
 - 4. The presence of clue cells on wet-mount examination**

Treatment :

- **Treatment for bacterial vaginosis includes oral metronidazole or clindamycin cream. Treatment of the male partner has not been beneficial in preventing recurrence .**

Infections Characterized by Cervicitis :

1. Chlamydia :

- is the most common bacterial STI in the United States.
- **Chlamydia trachomatis** is the bacterium that causes chlamydia.
- Chlamydia causes half of the 1 million recognized cases of pelvic inflammatory disease

Clinical Manifestations :

The majority of women (70% to 80%) are asymptomatic.

- 1. Mucopurulent vaginal discharge**
- 2. Urethritis**
- 3. Salpingitis**
- 4. Dysfunctional uterine bleeding**

Diagnosis and Treatment :

1. Nucleic acid amplification methods by polymerase chain reaction . these are highly sensitive and specific .
2. Culture and enzyme linked immunoassays.

➤ Treatment :

1. Antibiotics :

➤ Doxycycline or azithromycin.

2. Gonorrhoea :

- Is a serious and potentially very severe bacterial infection. It is one of the oldest STIs.
- It is rapidly becoming more and more resistant to cure.
- The cause of gonorrhoea is a gram-negative “*neisseria gonorrhoeae*”.

Clinical Manifestations :

1. Abnormal vaginal discharge
2. Dysuria
3. Cervicitis
4. Abnormal vaginal bleeding
5. PID
6. Neonatal conjunctivitis in newborns



Diagnosis and Treatment :

- **Nucleic acid hybridization tests (genprobe) .**
- **Should be tested for chlamydia also because coinfection (45%) is extremely common .**

□ Treatment :

- **Cefixime orally or ceftriaxone intramuscularly.**
- **Azithromycin orally or doxycycline should accompany all gonococcal treatment regimens if chlamydial infection is not ruled out .**

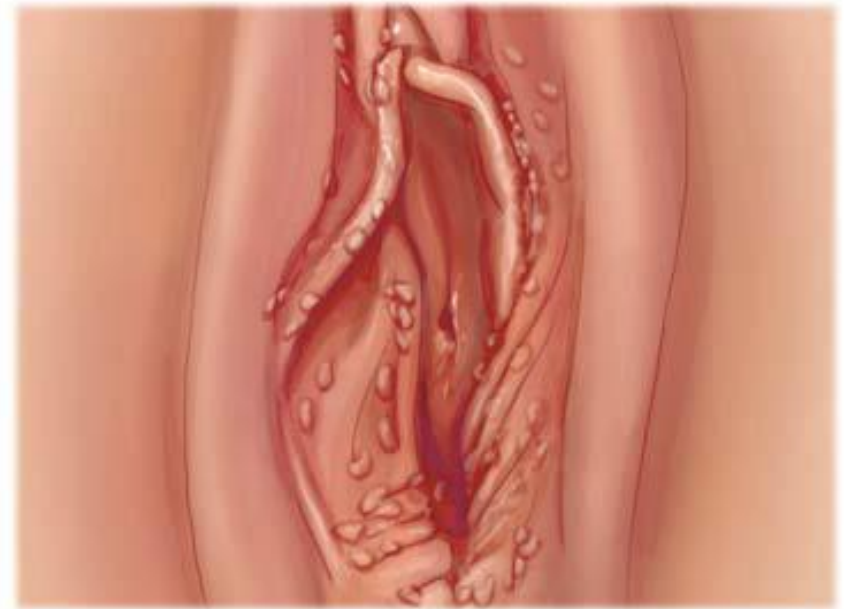
Infections Characterized by Genital Ulcers :

1. Genital Herpes Simplex :

- Genital herpes is a recurrent, life-long viral infection.
- **Two serotypes of HSV have been identified:**
- HSV-1 and HSV-2. Today, approximately 10% of genital herpes infections are thought to be caused by HSV-1 and 90% by HSV-2 .
- HSV-2 invades the mucous membranes of the genital tract and is known as herpes genitalis.

Clinical Manifestations :

1. Fever, chills, malaise
2. Dysuria
3. Headache
4. Genital irritation
5. Inguinal tenderness



Count...

- 6. The lesions in the primary herpes episode are frequently located on the vulva, vagina, and perineal areas. The vesicles will open and weep and finally crust over, dry, and disappear without scar formation . The virus remains dormant in the nerve cells for life, resulting in periodic outbreaks.**

Diagnosis and Treatment :

- **Diagnosis of HSV is often based on clinical signs and symptoms and confirmed by viral culture of fluid from the vesicle.**

➤ **Treatment :**

- **No cure exists, but antiviral drug therapy helps to reduce or suppress symptoms and recurrent episodes.**

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- **Advances in treatment with acyclovir, famciclovir, and valacyclovir have resulted in improved quality of life for those infected with HSV.**

2. Syphilis :

- Syphilis is a complex curable bacterial infection caused by the spirochete *treponema pallidum*.
- It is a serious systemic disease that can lead to disability and death if untreated.

Clinical Manifestations :

- Syphilis is divided into four stages: primary, secondary, latency, and tertiary.
- Primary syphilis is characterized by a chancre (painless ulcer) at the site of bacterial entry that will disappear within 1 to 6 weeks without intervention .
- Secondary syphilis appears 2 to 6 months after the initial exposure and is manifested by flulike symptoms and a maculopapular rash of the trunk, palms, and soles. The secondary stage of syphilis lasts about 2 years.

Count...

- **Once the secondary stage subsides, the latency period begins. This stage is characterized by the absence of any clinical manifestations of disease. This stage can last as long as 20 years.**
- **Tertiary or late syphilis occurs, with life threatening heart disease and neurologic disease that slowly destroys the heart, eyes, brain, central nervous system, and skin.**

Diagnosis :

- **Dark field microscopic examinations and direct fluorescent antibody tests of lesion exudate or tissue are the definitive methods for diagnosing early syphilis.**



Treatment :

- **Fortunately, there is effective treatment for syphilis.**
- **Penicillin , administered by either the intramuscular or intravenous route, is the preferred drug for all stages of syphilis.**

Human Immunodeficiency Virus (HIV)

Human Immunodeficiency Virus (HIV) :

- **Acquired immunodeficiency syndrome (AIDS) is a breakdown in the immune function caused by HIV, a retrovirus.**
- **The infected person develops opportunistic infections or malignancies that become fatal .**

Clinical Manifestations :

- **Acute primary infection occurs 2 to 6 weeks after exposure. Symptoms include fever, pharyngitis, rash, and myalgia. Most people do not associate this flulike condition with HIV infection.**
- **After initial exposure, there is a period of 3 to 12 months before seroconversion. The person is considered infectious during this time.**

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- **After the acute phase, the infected person becomes asymptomatic .**
- **When the cd4 t-cell count reaches 200 or less, the person has reached the stage of aids.**

Diagnosis :

- **Newly approved quick tests for HIV produce results in 20 minutes and also lower the healthcare worker's risk of occupational exposure by eliminating the need to draw blood.**
- **The diagnosis is finally confirmed when the CD4 count is below 200.**

Treatment :

The goals of HIV drug therapy are to:

- 1. Decrease the HIV viral load below the level of detection .**
- 2. Restore the body's ability to fight off pathogens**
- 3. Improve the client's quality of life**
- 4. Reduce HIV morbidity and mortality**

Nursing Management :

- **Nurses can play a major role in caring for the HIV positive woman by helping her accept the possibility of a shortened life span, cope with others' reactions to a stigmatizing illness, and develop strategies to maintain her physical and emotional health. The nurse can educate the woman about changes she can make in her behavior to prevent spreading HIV to others and can refer her to appropriate community resources such as HIV medical care services, substance abuse, mental health services, and social services.**

Nursing diagnosis :

- **Risk for infection related to positive HIV status and inconsistent compliance with antiretroviral therapy**
- **Knowledge deficit related to HIV infection and possible complications**

Hepatitis :

Hepatitis :

- **Hepatitis is an acute, systemic, viral infection that can be transmitted sexually. The viruses associated with hepatitis or inflammation of the liver are hepatitis A, B, C, D, E.**

Hepatitis B :

- **Hepatitis B (HBV) is transmitted through saliva, blood serum, semen, menstrual blood or vaginal secretion .**
- **Transmission among heterosexual partners accounted for 40% of infections, and transmission among men who have sex with men accounted for 15% of infections.**

Risk factors :

- 1. Include having multiple sex partners**
- 2. Engaging in unprotected receptive**
- 3. Anal intercourse**
- 4. Having a history of other STIs**
- 5. Sharing razors with infected partner**

Clinical Manifestations and Diagnosis:

- Hepatitis A produces flulike symptoms with malaise, fatigue, anorexia, nausea, pruritus, fever, and upper right quadrant pain.
- Symptoms of hepatitis B are similar to those of hepatitis A, but with less fever and skin involvement.

Diagnosis :

- **Requires serologic testing .**
- **Hepatitis B is diagnosed. by the presence of hepatitis B surface antibody (HBsAg) .**

Treatment :

- **Unlike other STIs, HBV preventable through immunization. HBV can result in serious, permanent liver damage. Treatment is generally supportive. No specific treatment for acute HBV infection exists.**

Nursing Management :

- **Nurses should encourage all women to be screened for hepatitis when they have their annual pap smear, or sooner if high-risk behavior is identified.**
- **Nurses can also explain that hepatitis b vaccine is given to all infants after birth in most hospitals. The vaccination consists of a series of three injections given within 6 months. The vaccine Has been shown to be safe and well tolerated by most recipients**

Prevention of Sexually Transmitted Infections :

- **It is not easy to discuss STI prevention when globally we are failing at it. Knowledge exists on how to prevent every single route of transmission, but the incidence continues to climb. Challenges to prevention of STIs include lack of resources and difficulty in changing the behaviors that contribute to their spread.**

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- **Regardless of the challenging factors involved, nurses must continue to educate and to meet the needs of all women to promote their sexual health. Successful treatment and prevention of STIs is impossible without education. Successful teaching approaches include giving clear, accurate messages that are age-appropriate and culturally sensitive.**

Any questions

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Pelvic Inflammatory Disease

Pelvic inflammatory disease :

- **Is an ascending infection of the upper female reproductive tract, most often caused by untreated chlamydia or gonorrhea .**
- **Complications include ectopic pregnancy, pelvic abscess, infertility, recurrent or chronic episodes of the disease, chronic abdominal pain, pelvic adhesions, and depression**

Clinical Manifestations and Diagnosis :

- **Because of the wide variety of clinical manifestations of PID, clinical diagnosis can be challenging.**
- **CDC has established criteria to establish the diagnosis of PID :**
- **Minimal criteria (all must be present) are lower abdominal tenderness and cervical motion tenderness.**

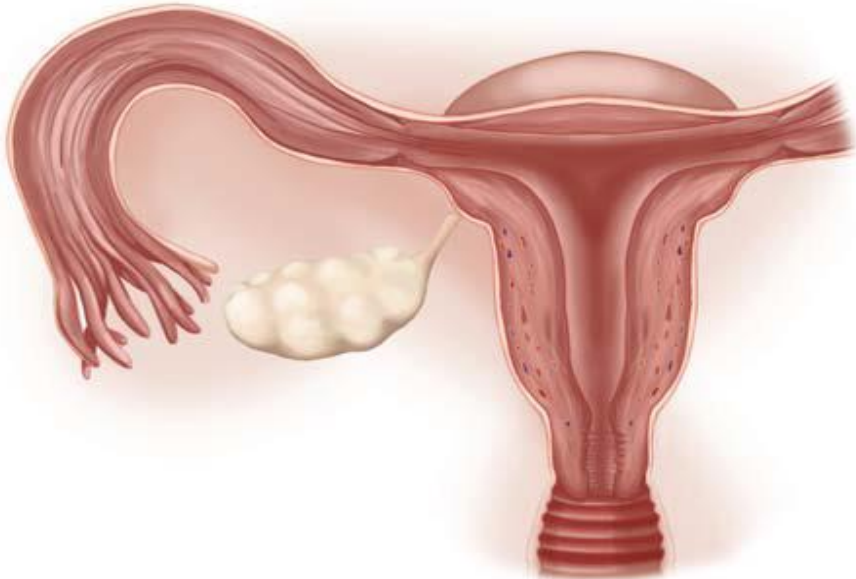
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➤ **supportive criteria that support a diagnosis of PID are:**

- 1. Abnormal cervical or vaginal mucopurulent discharge**
- 2. Oral temperature above 101°F**
- 3. Elevated C-reactive protein level**
- 4. N. gonorrhoeae or C. trachomatis infection documented**
- 5. White blood cells on saline vaginal smear**

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The only way to definitively diagnose PID is through an endometrial biopsy, transvaginal ultrasound, or laparoscopic examination.



Spread of gonorrhea or chlamydia

Risk factors :

- 1. Adolescence or young adulthood**
- 2. Having multiple sex partners**
- 3. Early onset of sexual activity**
- 4. History of PID or STI**
- 5. Having intercourse with a partner who has untreated urethritis**
- 6. Recent insertion of an intrauterine device (IUD)**
- 7. Engaging in sex during menses**

Treatment :

- **Treatment of PID must include empiric, broad-spectrum antibiotic coverage of likely pathogens.**
- **If no improvement is seen within 72 hours, the woman is admitted to the hospital. Treatment then includes intravenous antibiotics, increased oral fluids to improve hydration, bed rest, and pain management.**

Nursing Management :

- **Explaining the various diagnostic tests needed to the woman and ensure completing the course of antibiotics prescribed .**
- **The nurse needs to discuss with the woman the implications of PID and the risk factors for the infection; her sexual partner should be included if possible.**
- **Sexual counseling .**

Any questions

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