

GONORRHEA



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SEXUALLY TRANSMITTED DISEASES (STDs):

Sexually transmitted diseases (STDs), also known as sexually transmitted infections (STIs), are infections that are spread from one person to another during sexual activity. This can include vaginal, anal, or oral sex with someone who has an STD.

There are many different types of STDs, and they can be caused by bacteria, viruses, and parasites. Some of the most common STDs include chlamydia, gonorrhea, syphilis, herpes, human papillomavirus (HPV), hepatitis B and C, and HIV/AIDS.

SYPHILIS:

INTRODUCTION:

Gonorrhea is a sexually transmitted disease (STD) caused by the bacterium *Neisseria gonorrhoeae*. It is a common STD worldwide and can affect both men and women.

ETIOLOGY/CAUSES:

- **Bacteria:** *Neisseria gonorrhoeae*
- **Weakened immune system:** People with a weakened immune system, such as those living with malnutrition and diabetes, are more susceptible to infection.
- **Unprotected sex:** One of the biggest causes of STDs is unprotected sex, which means having sex without using a condom or other barrier method. This can increase the risk of transmitting infections from one person to another.
- **Multiple sexual partners:** Having multiple sexual partners can also increase the risk of getting an STD, as it increases the likelihood of coming into contact with an infected partner.

- **Sharing needles:** Sharing needles during drug use can also increase the risk of getting an STD.
- **Blood Transfusion:** Blood Transfusion without sterilizing or testing blood leads to infection.
- **Through placenta:** Mother-to-child transmission during pregnancy.

PATHOPHYSIOLOGY:

- **Transmission:** Gonorrhea is primarily transmitted through sexual contact, including vaginal, anal, or oral sex with an infected person. It can be passed from one person to another even if there are no visible symptoms or signs of infection.
- **Attachment and Invasion:** After exposure, the *Neisseria gonorrhoeae* bacteria attach and invade the mucous membranes of the reproductive tract or other affected areas. The bacteria have specific surface proteins that help them bind to and enter the cells lining of the mucous membranes.
- **Multiplication and Infection:** Once inside the host's cells, the bacteria multiply and spread, leading to the infection of nearby tissues. The presence of the bacteria triggers an immune response, causing inflammation and the release of immune cells to fight the infection.
- **Symptom Development:** The symptoms of gonorrhea can vary between individuals and may not always be present. Some people may experience noticeable symptoms, while others may have no symptoms at all. Symptoms typically appear within 2 to 14 days after exposure, although it can take longer in some cases.
- **Complications:** If left untreated, gonorrhea can lead to various complications. In women, it can progress to pelvic inflammatory disease (PID), which involves the spread of the infection to the upper reproductive organs. PID can cause long-term complications such as chronic pelvic pain, infertility, and ectopic pregnancies. In men, untreated gonorrhea can lead

to epididymitis, a painful condition affecting the epididymis (the tube that carries sperm), and potentially lead to infertility.

CLINICAL MANIFESTATION:

Symptoms of gonorrhea in men may include:

- Painful or burning sensation during urination.
- White, yellow, or green discharge from the penis.
- Swelling or redness at the opening of the penis.
- Frequent urination.
- Testicular pain or swelling.

Symptoms of gonorrhea in women may include:

- Increased vaginal discharge, often yellowish or greenish in color.
- Painful or burning sensation during urination.
- Vaginal bleeding between periods.
- Painful sexual intercourse.
- Abdominal or pelvic pain.
- Itching or irritation in the genital area.

DIAGNOSIS:

- **Family history & Medical history**
- **Physical examination:** The healthcare provider will check for signs & symptoms.
- **Blood tests:** Blood tests may be done to check for signs of infection, such as elevated white blood cell count.
- **Nucleic Acid Amplification Tests (NAATs):** NAATs are the most commonly used and recommended tests for gonorrhea diagnosis. These

tests detect the genetic material (DNA or RNA) of the bacteria in a sample taken from the infected area. The samples can include urine, swabs from the urethra (in men), cervix (in women), rectum, throat, or other potentially infected sites. NAATs are highly sensitive and specific, offering accurate and reliable results.

- **Gram Stain:** A gram stain may be performed on a sample taken from the infected area to detect the presence of *Neisseria gonorrhoeae* bacteria. This test involves staining the sample and examining it under a microscope. While it provides rapid results, it is less sensitive than NAATs and may not always detect the infection, particularly in asymptomatic individuals.

PHARMACOLOGICAL MANAGERMENTS:

- **Dual Therapy:** The current standard treatment for gonorrhea involves dual therapy, which means using two different antibiotics simultaneously. This approach helps improve treatment efficacy and reduce the risk of developing antibiotic resistance. The recommended dual therapy regimen for gonorrhea includes:

Ceftriaxone: It is an injectable cephalosporin antibiotic and is usually administered as a single intramuscular dose.

Azithromycin: It is an oral macrolide antibiotic taken as a single dose in combination with ceftriaxone.

- **Alternative Treatments:** In cases where ceftriaxone cannot be used due to allergies or other reasons, the following alternative antibiotics may be considered:

Spectinomycin: It is an injectable antibiotic that can be used as an alternative to ceftriaxone.

Gentamicin: It is an injectable aminoglycoside antibiotic that can also be used as an alternative.

NON PHARMACOLOGICAL MANAGERMENTS

- **Use condoms during sexual activity:** Latex or polyurethane condoms can reduce the risk of transmission when used correctly and consistently during vaginal, anal, and oral sex.
- **Limit your number of sexual partners:** The more sexual partners you have, the higher your risk of HIV exposure.
- **Avoid sharing needles:** Sharing needles, syringes, or other injecting equipment can transmit infections.
- **Abstinence:** Abstaining from sexual activity is the only 100% effective way to avoid HIV transmission.
- **Screening During Pregnancy:** Pregnant women should receive routine syphilis screening during prenatal care. Timely identification and treatment of syphilis in pregnant women can prevent transmission to the fetus and reduce the risk of congenital syphilis.
- **Education and Awareness:** Promote education and awareness about syphilis and other STIs in communities, schools, and healthcare settings. Encouraging comprehensive sexual health education, understanding the modes of transmission, and dispelling myths can contribute to prevention efforts.