

SYPHILLIS



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By

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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:

Syphilis is a sexually transmitted disease (STD) caused by the bacterium *Treponema pallidum*. Syphilis has several stages and can affect various organ systems if left untreated.

Here is some information about the stages of syphilis:

Primary stage: The first sign of syphilis is a painless sore or ulcer called a chancre. It usually appears at the site of infection, such as the genitals, anus, or mouth, within a few weeks or 3 weeks after exposure. The sore typically heals on its own within a few weeks, even without treatment.

Secondary stage: If left untreated, syphilis progresses to the secondary stage. This stage is characterized by a rash that may appear on the palms of the hands, soles of the feet, or other parts of the body. Other symptoms may include fever, fatigue, sore throat, swollen lymph nodes, and patchy hair loss. These symptoms can come and go over several weeks or months.

Latent stage: After the secondary stage, syphilis enters a latent stage where there are no visible symptoms. The infection is still present in the body, but the person may not experience any signs or symptoms for years. However, the bacteria can still be transmitted to others during this stage.

Tertiary stage: If syphilis remains untreated for a long time, it can progress to the tertiary stage. This stage can occur years or even decades after the initial infection. Tertiary syphilis can affect the heart, brain, blood vessels, bones, and other organs. It can lead to serious complications, including cardiovascular problems, neurosyphilis (affecting the nervous system), and gummatous syphilis (formation of destructive gummas or lesions).

ETIOLOGY/CAUSES:

- **Bacteria:** *Treponema pallidum*
- **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:** Syphilis is primarily transmitted through sexual contact, including vaginal, anal, or oral sex. It can also be transmitted from an

infected mother to her unborn child during pregnancy or childbirth. Rarely, it can be transmitted through blood transfusion or contact with infected open sores.

- **Incubation period:** After exposure to the bacteria, there is an incubation period where no symptoms are present. The duration of this period can vary but is typically around 3 weeks (range: 10 to 90 days).
- **Primary stage:** The first visible sign of syphilis is the appearance of a painless sore called a chancre. The chancre usually develops at the site of infection, such as the genitals, anus, mouth, or other areas. It is highly contagious and contains a large number of bacteria. The chancre typically lasts for 3 to 6 weeks and then heals on its own, even without treatment. However, the infection progresses if left untreated.
- **Secondary stage:** If syphilis is not treated during the primary stage, it progresses to the secondary stage. This stage is characterized by a wide range of symptoms, including a skin rash, fever, fatigue, sore throat, swollen lymph nodes, muscle aches, and patchy hair loss. The rash can appear on the palms of the hands, soles of the feet, or other parts of the body. These symptoms may come and go over a period of weeks or months.
- **Latent stage:** After the secondary stage, syphilis enters a latent stage where there are no visible symptoms. This stage can last for years, and individuals may not be aware that they are infected. However, the bacteria are still present in the body and can cause complications if not treated.
- **Tertiary stage:** If syphilis remains untreated for a long time, it can progress to the tertiary stage, which can occur several years or even decades after the initial infection. Tertiary syphilis is characterized by severe complications that can affect multiple organ systems.

CLINICAL MANIFESTATION:

Primary Stage:

- Small, painless sore or ulcer called a chancre
- Chancre is usually firm, round, and appears at the site of infection (genitals, anus, mouth)
- Chancre can last for 3 to 6 weeks and heals without treatment

Secondary Stage:

- Skin rash, typically appearing as rough, reddish-brown or copper-colored spots on the palms of hands and soles of feet
- Rash may also affect other parts of the body, including trunk, limbs, face, and mucous membranes
- Flu-like symptoms such as fever, fatigue, headache, sore throat, swollen lymph nodes, and muscle aches
- Patchy hair loss
- Weight loss
- Lesions in the mouth, throat, or genital area
- These symptoms can come and go over several weeks or months

Latent Stage:

- No visible symptoms or very mild symptoms
- The infection is still present in the body, but there are no apparent signs or symptoms

Tertiary Stage:

- In the late stage of syphilis, serious complications can occur, affecting multiple organ systems Cardiovascular syphilis, Neurosyphilis, Gummatous syphilis: Formation of destructive lesions (gummas) in various organs, including skin, bones, liver, and brain.

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.
- **Darkfield Microscopy:** This test involves examining a sample from a syphilis sore or skin rash under a microscope. The bacteria can be visualized using darkfield illumination. However, this test is less commonly used nowadays.
- **Polymerase Chain Reaction (PCR):** PCR tests detect the presence of *T. pallidum* DNA in a sample, such as blood or fluid from a sore. PCR tests are highly sensitive and specific but may not be readily available in all healthcare settings.
- **Cerebrospinal Fluid (CSF) Examination:** In cases where neurosyphilis is suspected, a lumbar puncture (spinal tap) may be performed to collect cerebrospinal fluid. The fluid is then tested for the presence of *T. pallidum* antibodies, as well as other markers of inflammation or infection.

PHARMACOLOGICAL MANAGERMENTS:

Benzathine penicillin G, Procaine penicillin G, Aqueous crystalline penicillin G, Doxycycline, Tetracycline

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.