**SYPHILIS**

**Definition**

Syphilis is an acute and chronic infectious disease caused by the spirochete *Treponema pallidum.* It is acquired through sexual contact or may be congenital in origin.

**Incidence**

In the US the incidence is highest in urban populations especially between 15 year age and 39 years.

Common among HIV patients. 34000 cases of primary and secondary syphilis reported annually

**Causes**

It is caused by the spirochete trepenoma palllidum

**Transmission**

* Transmission is primarily through sexual contact with an infected person.
* Prenatal transmission is possible
* Transmission by way of fresh blood transfusion(rare)

**Pathophysiology**

The infecting organism penetrates intact mucous membranes of or abrasions in the skin, entering lymphatics and blood.

Systemic infections precede primary lesion development at the site of inoculation

**Stages of syphilis**

* **Primary syphilis**occurs 2 to 3 weeks after initial inoculation with the organism. A painless lesion at the site of infection is called a *chancre.* Untreated, these lesions usually resolve spontaneously within about 2 months.
* **Secondary syphilis**occurs when the hematogenous spread of organisms from the original chancre leads to generalized infection. The rash of secondary syphilis occurs about 2 to 8 weeks after the chancre and involves the trunk and the extremities, including the palms of the hands and the soles of the feet. Transmission of the organism can occur through contact with these lesions. Generalized signs of infection may include lymphadenopathy, arthritis, meningitis, hair loss, fever, malaise, and weight loss.
* **Latent syphilis**. Stage of the disease in which no clinical symptoms are manifested, but the pathogens are present in the body and serum antibody tests are positive. Divided into early latency (less than four years) and late latency (more than four years).
* **Tertiary syphilis**is the final stage in the natural history of the disease. It is estimated that between 20% and 40% of those infected do not exhibit signs and symptoms in this final stage. Tertiary syphilis presents as a slowly progressive wand has three subtypes

1. Cardiovascular syphilis which cause decreased cardiac output that may cause decreased urine output and decreased sensorium related to hypoxia and pulmonary congestion
2. Neurosyphilis affecting meningovascular tissues: presents with headache insomnia seizures and psychological difficulties. Parenchymal tissue is affected a person will have paranoia, illusions, slurred speech and hallucinations
3. Late benign syphilis: presents with gummas {lesions that develop between 1 and 10years after infection and may be chronic, superficial nodule or deep nodule. They are painless and can be large or small.

**Signs and symptoms**

**Primary**

One or more chancres on genitalia, fingers, anus, lips, tongue, nipples, nostrils, and eyelids. In females it may go up to the cervix

**Secondary**

Headache malaise, nausea and vomiting anorexia weight loss sore throat slight fever, rashes, alopecia,

In warm moist areas, lesions enlarged and eroding producing highly contagious pink or graying white lesions(condylomata lata)

**Tertiary**

Headache, insomnia, seizures and psychological difficulties. Parenchymal tissue is affected a person will have paranoia, illusions, slurred speech and hallucinations

**Assessment and diagnosis**

Because syphilis shares symptoms with many diseases, clinical history and laboratory evaluation are important. The conclusive diagnosis of syphilis can be made by direct identification of the spirochete obtained from the chancre lesions of primary syphilis. Serologic tests used in the diagnosis of secondary and tertiary syphilis require clinical correlation in interpretation. The serologic tests are summarized as follows:

• *Nontreponemal* or *reagin tests,* such as the Venereal Disease Research Laboratory (VDRL) or the rapid plasma reagin circle card test (RPR-CT), are generally used for screening and diagnosis as the detect non-specific antibody. Reactivity reduces with treatment use.

• *Treponemal tests,* such as the fluorescent treponemal antibody absorption test (FTA-ABS) and the microhemagglutination test (MHA-TP), are used to verify that the screening test did not represent a false positive result. Positive results usually are positive for life and therefore are not appropriate to determine therapeutic effectiveness.

**Complications**

* Cardiovascular disease
* Irreversible neurologic disease
* Psychiatric disorders
* With fetal infection

1. Spontaneous abortion
2. Still birth
3. Low birth weight
4. Deafness

**Medical management**

1. Treatment of all stages of syphilis is administration of antibiotics.
2. Penicillin G benzathine is the medication of choice for early syphilis or early latent syphilis of less than 1 year’s duration. It is administered by intramuscular injection at a single session.
3. Patients with late latent or latent syphilis of unknown duration should receive three injections at 1-week intervals.
4. Patients who are allergic to penicillin are usually treated with doxycycline (Adoxa).
5. The patient treated with penicillin is monitored for 30 minutes after the injection to observe for a possible allergic reaction.

**Nursing** **management**

In the nursing management the nurse should

Follow standard precaution

Administer prescribed drugs

Keep lesions clean and dry and dispose materials properly

Monitor response to treatment

Monitor for signs of any complications

**Patient teaching on prevention**

* If multiple penicillin injections are required, complete the full course of therapy.
* Refrain from sexual contact with previous or current partners until the partners have been treated.
* If you have primary or secondary syphilis, be aware that with proper treatment, skin lesions and other sequelae of infection will improve, and serology eventually will reflect cure.
* Condoms significantly reduce the risk of transmission of syphilis and other sexually transmitted diseases.
* Having multiple sexual partners increases the risk of acquiring syphilis and other sexually transmitted

**References**

Brunner and Suddarth's Textbook of Med.-Surg. Nursing 12th ed. (2 vols) - S. Smeltzer, et al., (Lippincott, 2010)

Color atlas of medical microbiology (kayser, thieme 2005)

Nurses quick check diseases 2nd ed(Lippincott, 2010)

Bassavanthappa Community health nursing 2nd ed