

Review of Occurrence and Control of Syphilis in Kenya

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Abstract: Syphilis is an infection caused by a bacteria type known as *Treponema pallidum*. Syphilis progresses in stages and can lead to serious complications or death. . It is estimated that over 12 million new cases of syphilis in the world occur each year and a quarter of which occur in Africa .The largest proportion (15–49) years found in sub-Saharan Africa, Asia, and Latin American. In pregnancy, untreated early syphilis result in stillbirth (25%) and is responsible for 14% of neonatal deaths with an overall peri-natal mortality of about 40%. Syphilis prevalence in pregnant women in Africa ranges from 4% to 15%. In Kenya, the prevalence of syphilis among the general population is about 2%. Screening pregnant women for syphilis provides an important means to monitor population prevalence and identifying pockets of high syphilis prevalence. Engagement in unsafe sexual activity puts one at high-risk. The more sexual partners you have, the more likely you are to get syphilis. Without treatment, syphilis can lead to damage throughout the body. Syphilis also increases the risk of HIV infection and, for women, can cause problems during pregnancy. Treatment can help prevent future damage but can't repair or reverse damage already caused. Broadly, transmission modes include sexual, nonsexual and mother-to-child transmissions. More so syphilis develops in four broad stages viz: primary syphilis, secondary syphilis, latent syphilis and tertiary stage with varying symptoms with each stage. But the stages may overlap, and symptoms don't always occur in the same order. You may be infected with syphilis and not notice any symptoms for years. The prevention strategies include avoiding sex with infected partners, health education, use of protective devices such as condoms and avoiding drugs or substances that could lead to unsafe sex. The recommendations are to carry out screening services, reporting cases within 24 hours, testing and treating cases to avoid re-infection, health education interventions, contact tracing and testing, enhancing maternal syphilis screening and treatment and improving the support to the division of reproductive health services. The Ministry of Health should apply Community Health Strategy through using Community Health Volunteers to mobilize the Kenyan population at household level to go for screening as well as carrying out screening at healthcare facilities during routine visits by the clients seeking medical attention.

Keywords: Complication, Prevention, *Treponema pallidum*, Risk factors, Treatment, Occurrence.

1. INTRODUCTION

Syphilis is a bacterial infection usually spread by sexual contact. The bacteria that causes the infection is of the type known as *Treponema pallidum*. The infection starts as a painless sore on the genitals, rectum, or inside the mouth. Syphilis can be challenging to diagnose as a person can be infected without showing any symptoms for years. However, the earlier you discover the infection, the better. Syphilis that remains untreated for a long time can cause major damage to important organs, like the heart and brain.

Syphilis is only spread through direct contact with syphilitic chancres. It can't be transmitted by sharing a toilet with another person, wearing another person's clothing, or using another person's eating utensils. Syphilis progresses in stages and can lead to serious complications or death. Having syphilis also makes you more vulnerable to HIV. When diagnosed early, syphilis can be cured with antibiotics.

It is estimated that over 12 million new cases of syphilis in the world occur each year and a quarter of which occur in Africa (World Health Organization, 2010). The largest proportion (15–49) years found in sub-Saharan Africa, Asia, and Latin American.

There are substantial geographical variations in estimated prevalence and incidence. Sub-Saharan Africa, accounts for 20% of the global estimates and has the highest prevalence and incidence rates. According to the World Health Organization prevalence is higher in urban areas than in the rural areas, and in unmarried people and younger adults. Screening pregnant women for syphilis provides an important means to monitor population prevalence and of identifying pockets of high syphilis prevalence.

2. RISK FACTORS

You face an increased risk of acquiring syphilis if you:

- Engage in high-risk sexual activity, including unprotected sex, sex with multiple partners, having sex with a new partner, or having sex under the influence of drugs or alcoholic substances.
- Are a man who has sex with men.
- Are infected with the human immunodeficiency virus (HIV)

The more sexual partners you have, the more likely you are to get syphilis or another sexually transmitted disease (STD). Note that even if you've had syphilis and you have been treated for it previously, you can get it again.

3. COMPLICATIONS

Without treatment, syphilis can lead to damage throughout the body. Syphilis also increases the risk of HIV infection and, for women it can cause problems during pregnancy. Treatment can help prevent future damage but can't repair or reverse damage that has already occurred. Small bumps or tumors called gummas, can develop on the skin, bones, liver or any other organ in the late stage of syphilis. If you're treated during this stage, the gummas will usually disappear.

Neurological problems: In the late stage, syphilis can cause a number of problems with the nervous system, including: Stroke, Infection and inflammation of the membranes and fluid surrounding the brain and spinal cord (meningitis), Poor muscle coordination, Numbness, Paralysis, Deafness or visual problems, Personality changes and Dementia

Cardiovascular problems: these may include bulging (aneurysm) and inflammation of the aorta — the body's major artery — and of other blood vessels. Syphilis may also cause valvular heart disease, such as aortic valve stenosis.

HIV infection: adults with sexually transmitted syphilis or other genital ulcers have an estimated two- to five-fold increased risk of contracting HIV. A syphilis sore can bleed easily, providing an easy way for HIV to enter the bloodstream during sexual activity.

Pregnancy and childbirth complications: about 40 percent of babies who contract syphilis from their mothers will die — either through miscarriage, stillbirth or within a few days of birth. The chance of premature (preterm) birth also is higher.

4. MODE OF TRANSMISSION

Sexual:

- Syphilis transmission can occur when infected lesions come in contact with the soft skin of the mucous membrane found inside the vagina, urethra or with an abrasion during vaginal, oral and anal sex, even if there is no sexual penetration.
- It is most easily spread during the first stage because symptoms usually go unnoticed.
- Syphilis can also be contracted from exposure to lesions or syphilitic "warts" during the secondary stage.
- If "warts" are present, they may easily spread the syphilis bacteria, due to the large amount of *T. pallidum* present.
- Because symptoms of secondary syphilis can re-occur, a person who has entered the latency stage of syphilis can still transmit the disease.

Nonsexual:

- Because syphilis bacteria are extremely fragile, they cannot be spread during contact with objects such as toilet seats or towels.
- People, especially health care workers, can be at risk for syphilis if an abrasion or cut on the skin comes into contact with a syphilitic lesion

Mother-to-Child (MTC):

- Syphilis can also be transmitted during pregnancy or during childbirth from a mother to her infant.

Signs and Symptoms:

Syphilis develops in four stages and symptoms vary with each stage. But the stages may overlap, and symptoms don't always occur in the same order. You may be infected with syphilis and not notice any symptoms for years.

Primary Syphilis:

- Chancre: The primary stage of syphilis is usually marked by the appearance of a single sore, known as a chancre, within 10 to 90 days after contact with the bacteria at the site of infection. It usually appears as a single, painless sore that is raised or elevated.
- Chancres may be found: outside the genitals, including the penis, scrotum and vagina; inside the vagina or rectum; at or around the anus; or, on the lips or in the mouth, though this is not so common. The sore can last from one to five weeks and will go away by itself.
- The chancre will go away with or without treatment. Without treatment, the person will still have syphilis and can transmit it to others.

Secondary Syphilis:

- The secondary stage of syphilis can develop seventeen days to six and a half months after infection. Symptoms can last from 2 to 6 weeks.
- Symptoms can include: a rough, reddish-brown rash that appears on the palms of the hands or the soles of the feet, which normally does not itch; rashes on other parts of the body, including the neck, head and torso; condylomata lata or syphilitic "warts", moist, raised or elevated skin lesions, may be found in the anus or genital area; "mucous patches," flat, round, grayish-white sores, can appear on the mouth, throat, and cervix; patchy loss of hair on the head and other parts of the body; or, a general sense of ill health.
- Symptoms of secondary syphilis will clear up with or without treatment, but the disease will still be present if untreated. It will then enter into a latent stage, which has no signs or symptoms.

Latent Stage:

- Latent syphilis is defined as the time where there are no signs or symptoms of the disease
- Develops from two to 30 or more years after infection.
- Because there are no signs or symptoms, the only way to test for infection during the latent period is by blood test.
- A relapse of secondary syphilis can occur once the disease has entered the latent stage. This normally will happen during the first two years of latency.

Late Stage (Tertiary):

- Symptoms of late stage or tertiary syphilis can occur 2 to 30 or more years after infection.
- Complications during this stage can include: gummas (small bumps or tumors that can develop on the skin, bones, liver or any other organ), problems with heart and blood vessels, or chronic nervous system disorders, such as blindness, insanity and paralysis.

- If treated during this period, gummas will usually disappear. Though treatment at this phase will cure the disease and stop future damage to the body, it cannot repair or reverse the damage that occurred before treatment.

Congenital Syphilis:

- A mother infected with syphilis can pass the disease to her unborn child, either during pregnancy or in childbirth. A newborn infected in this manner has congenital syphilis.
- Early signs generally appear from three to eight weeks after a baby is born.
- Even though these symptoms develop soon after birth, most cases go unnoticed until late congenital symptoms appear in childhood or adolescence.
- Late congenital syphilis has similar symptoms to tertiary syphilis in adults, though heart complications rarely occur in cases of congenital syphilis

5. PREVENTION AND CONTROL MEASURES

- Avoiding sex, or have mutually monogamous sex with one partner who is uninfected.
- Talking with the sex partners about the status and history of the diseases.
- If one doesn't know the Syphilis status of the partner, they should use a valid condom with each sexual contact.
- Avoiding excessive use of alcohol or other drugs and substances, this can cloud one's judgment and lead to unsafe sexual practices.

6. RECOMMENDATIONS

- Screening of all pregnant women for syphilis at their first prenatal visit.
- Women at high risk should be re-screened early in their third trimester and again at delivery.
- If a patient is diagnosed with syphilis, immediate treatment should be undertaken. Treatment at least 30 days prior to delivery is likely to prevent congenital syphilis.
- All cases of syphilis and congenital syphilis should be reported within 24 hours to the sub county disease surveillance coordinator for onward reporting to the county and national level disease surveillance coordinators.
- Patients should be advised to tell their sex partners about the infection and encourage them to get tested and treated to avoid re-infection.
- Before discharging any newborn infant from the hospital, the mother should be tested for syphilis at least once during her pregnancy or at delivery.
- If a woman delivers a stillborn infant, she should be tested for syphilis.
- Tenets of quality sexually transmitted disease prevention should apply to pregnant women as well, hence a sexual history throughout the course of client's pregnancy, and talk with her about prevention methods should be done.
- It is important to enhance antenatal syphilis screening both for sentinel surveillance and to reduce the incidence of adverse pregnancy outcomes attributable to syphilis as well as congenital syphilis.
- More efforts to increase public and health professional awareness (health promotion) of the potential serious consequences of syphilis. All these efforts will be required for disease control and eventually elimination.
- The Kenyan Division of Reproductive Health should benefit from additional support to strengthen National Sexually Transmission Infections program and policies for the Kenyan population.
- Enhance Maternal syphilis screening and treatment as it is the most cost-effective public health interventions.
- Provision of health care facilities for early diagnosis and treatment of Sexually Transmitted Infections.
- Contact tracing reduce asymptomatic disease in the community and shorten the average period of infectiousness.

7. CONCLUSION

The Ministry of Health under the Reproductive Health Division should apply Community Health Strategy through using Community Health Volunteers to mobilize the Kenyan population at household level to go for screening as well as carrying out screening at healthcare facilities for the during routine visits by the clients seeking medical attention.

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