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DRUG OF CHOICE TREATMENT SYPHILIS IN PREGNANCY

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ABSTRACT

To treatment patient syphilis in pregnancy. Literatur searches use medical search egines for example Pubmen, Google Scholar and medical scientific journal. Drug of choice treatment for syphilis in pregnancy is benzathine penicilin, procaine penicillin, eritromicin or azitromicyn depending on the syphilis stage. Primary,secondary, early latent (<1 year) use benzathine penicillin G 2,4 million unit IM once over procaine penicillin 1,2 million units IM once daily for 10 day, If benzathin or procain allergy/ are not available WHO STI suggest using Erythromycin 500 mg orally four times daily for 14 days, ceftriaxone 1 g IM daily (10-14 days) or Azithromycin 2 g once orally. Late syphilis (> 2 years durations) benzathine penicillin G 2.4 million units IM once weekly for 3 consecutive weeks. Latent syphilis (unknow duration) use Benzathine penicillin G as 3 doses of 2.4 million units IM each at 1week intervals. syphilis in pregnancy must be treated adequately, so as to prevent death in infants or congenital syphilis.

Keywords: Syphilis, Benzathin penicillin, Eritromycyn, Procain penicillin, Azithromycin.

INTRODUCTION

Sexually transmitted infections (STIs) are a major public health problem worldwide. In 2012, an estimated 357 million new case of curable DTIs(gonorrhoeae, chlamydia, syphilis and trichomoniasis) occured among 15 to 49 year old worldwide, including 5,6 million cases of syphilis. (World Health Organization, 2017) The The World Health Organization (WHO) estimates that 1.3 million pregnant women annually have active syphilis infections. In 2015, the Centres for Disease Control (CDC) released a report warning of a 38% increase in reported cases of congenital syphilis between 2012 and 2014. Syphilis is a sexually transmitted disease (STD) caused by the bacterium Treponema pallidum, subspecies Pallidum. It's a major disease worldwide, and it potentially causes life-long health problems with the potential manifestation of multiple patterns of skin and visceral disease. Syphilis antenatal screening and treatment for pregnant infected women prevent mother-to-child transmission (MTCT), preventable deaths of newborns and children under 5 years of age, ensuring universal access to sexual and reproductive healthcare services, and achieving Universal Health Coverage (UHC). (Purnamasari et al., 2021)(*Elimination of Congenital Syphilis Book (2) (1).Pdf*, n.d.).

METHOD

Literature searches use medical search engines such as Pubmed, Google Scholar and Medical Scientific journals, for example the American of Journal which is learning Obstetrics and also learning Gynecology.

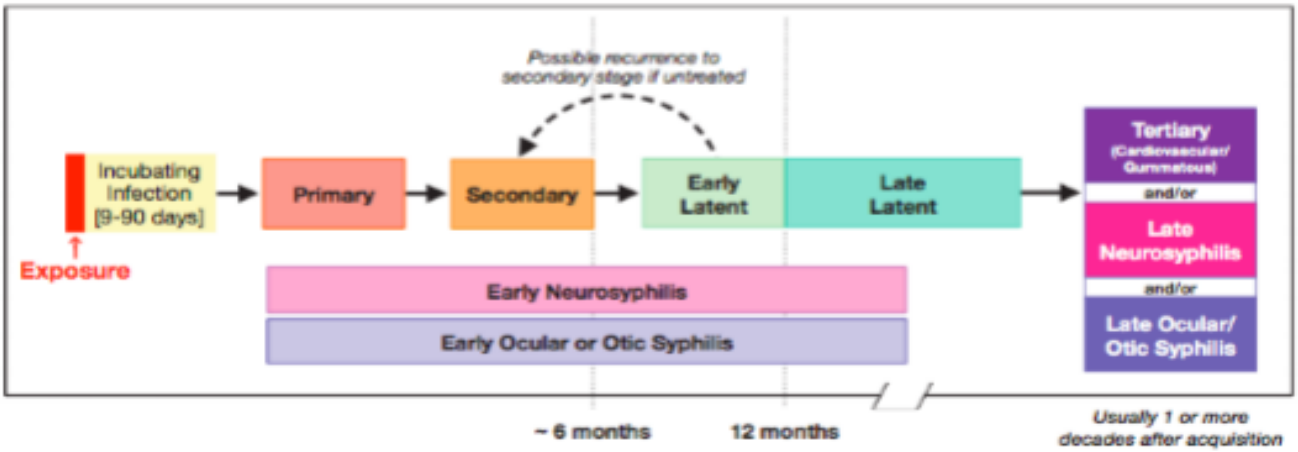
RESULTS AND DISCUSSION

Syphilis is a disease whose etiological agent is Treponema pallidum. (Medeiros et al., 2022) Syphilis is transmitted through sexual contact (via infectious lesions of the mucous membranes or abraded skin), via blood transfusion, or from a pregnant woman to her fetus. Mother-to-child (congenital) transmission of syphilis is typically devastating to the fetus if maternal infection is not diagnosed and treated early in pregnancy. This brief highlights key recommendations from the 2017 WHO guideline on syphilis screening and treatment for pregnant women and outlines implementation considerations (Screening & Women, 2020).

Table I. Syphilis Stage, Signs and Symptoms.(Screening & Women, 2020)(Medeiros et al., 2022)(Ireland, 2018)

Stage of Infection	Common Signs and Symptoms	Comments
Primary Incubation periode primary syphilis is usually 21 days (range 9-90 days)	Painless sore(s) (chancre) at the site of infection on or around the genitals, anus, rectum or mouth	May be mild and not noticed. Symptoms typically last 3–6 weeks. Associated with severe adverse outcomes for the fetus and newborn
Secondary	skin rash, fever, swollen lymph nodes; rash may appear first on palms of hands or soles of feet	Associated with severe problems of the heart, brain, and other organs. Usually occurs 4-10 wks after initial chancre
Latent	No signs or symptoms Relaps of secoundary syphilis can ocur	May cause serious adverse pregnancy outcomes in over half of cases. Approximately 25% of patients will develop a recurrence of secondary disease during the early latent stage
Tertiary	Gummas (large sores) Neurologic or cardiac symptoms	Tertiary syphilis is severe and can present 10–30 years after a first primary infection (does not develop in all people with latent syphilis).

Figure 1. The Natural History of Untreated Syphilis. (Medeiros et al., 2022)



All pregnant women should be screened for syphilis at First prenatal visit , 10-14 weeks pregnancy and Third trimester (between 28-32 weeks of gestation) and Delivery. Any woman with an intrauterine fetal death > 20 weeks should be tested for syphilis. (Ireland, 2018)

(Medeiros et al., 2022) (Iud, 2021) Treponema pallidum antibody (TPAB) testing can be ordered by prenatal providers at routine prenatal visits OR at an OB Triage encounter or emergency/urgent care encounter. Do not delay glucose testing for TPAB testing. Women at higher risk for syphilis who may warrant more frequent screening include, but are not limited to the following, Is a person who injects drugs or whose partner injects drugs, has an HIV-infected partner, has had new or multiple sex partners during pregnancy, has symptoms suggesting acute syphilis infection (see table above), has recently been incarcerated and Has been diagnosed with another sexually transmitted infection (STI) in past year.(Medeiros et al., 2022)(Australian & Practice, n.d.). Testing algorithm for diagnosis. Treponema palidum antibody (TPAB). If first time tes TPAB is positive, this will reflex automatically to RPR, If TPAB is positive but RPR is negative, automatically to TPPA (Treponema palidum agglutination assay). (Medeiros et al., 2022)

Figure 2. Testing algorithm-Diagnosis.(Medeiros et al., 2022)

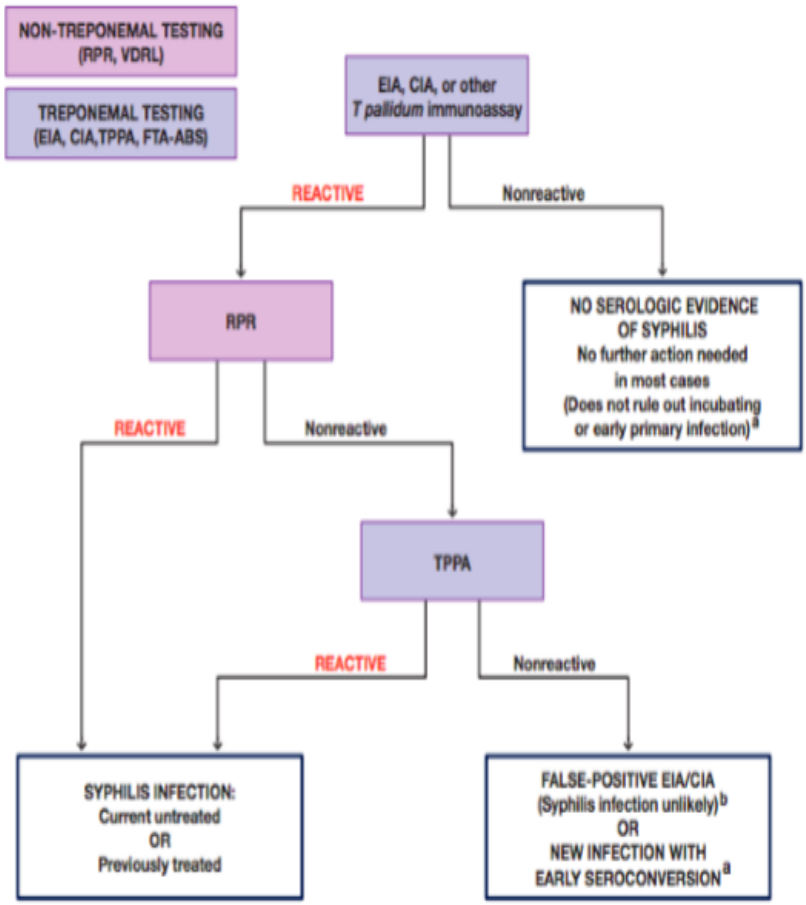


Table 2. Treatment recomendations for adult women pregnancy.(Medeiros et al., 2022)(World Health Organization, 2017)

Syphilis stage	Treatment
Primary,secondary, early latent (<1 year)	Benzathine penicillin G 2.4 million units IM in a single dose* *Note: There is some evidence that pregnant women should receive 1 additional dose 1 week after the initial dose. Early syphilis (WHO STI): benzathine penicillin G 2,4 million unit IM once over procaine penicillin 1,2 million units IM once daily for 10 day

	If benzathin or procain allergy/ are not available WHO STI suggest using Erythromycin 500 mg orally four times daily for 14 days, ceftriaxone 1 g IM daily (10-14 days) or Azithromycin 2 g once orally.
Late syphilis (> 2 years durations)	benzathine penicillin G 2.4 million units IM once weekly for 3 consecutive weeks
Latent syphilis (unknow duration) Tertiary syphilis (Normal CSF examination)	Benzathine penicillin G as 3 doses of 2.4 million units IM each at 1week intervals Note: Missed doses are not acceptable in pregnant women; women who miss any doses must restart until all 3 doses are given at correct interval.
Neuro syphilis Occular syphilis	Aqueous crystalline penicillin G 18–24 million units per day, administered as 3–4 million units IV every 4 hours or continuous infusion, for 10–14 days
Additional Considerations for Treatment for Syphilis in Pregnant Women	Additional doses of penicillin may be indicated if evidence of fetal syphilis on ultrasound. Consult ID and MFM to determine if additional doses are required

Historically, congenital syphilis increases when cases of syphilis among women of childbearing age increase. Congenital syphilis can cause severe illness in babies, including premature birth, low birth weight, birth defects, blindness, and hearing loss. It can also lead to stillbirth and infant death (Update, 2019). The behavioural intervention consisted of selection and training of peer facilitators within intervention clinics (health-care workers opinion leaders); individual antenatal care provider dis cussions (academic detailing); the use of reminders for testing and treatment; packaging of treatment kits; and monthly supportive supervision visits, on top of the provision of supplies (rapid treponemal tests, benzathine penicillin, and anaphylaxis treatment) (Perez & Mayaud, 2019).

CONCLUSION

For all pregnant women, test for syphilis at least twice during pregnancy: 1) at the first clinical encounter (ideally during the first trimester) and 2) during third trimester (ideally between 28-32 weeks gestation). Women with risk factors for syphilis should be tested a third time at delivery. Infants should not be discharged from the hospital unless the mother has been tested for syphilis at least once during pregnancy. Prevention relies on early detection of unrecognized syphilis in the pregnant woman, detection of newly acquired syphilis during pregnancy, and ensuring completion of maternal treatment at least four weeks before delivery

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