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Late latent syphilis with early syphilis titer in pregnancy: A case report

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Case Report

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ABSTRACT

Syphilis is a chronic and systemic sexually transmitted infection caused by Treponema pallidum. The prevalence of syphilis according to the World Health Organization (WHO) is around 12 million cases worldwide and in pregnant women around 1.8 million cases. Syphilis screening in pregnancy is important to break the chain of transmission of congenital syphilis. We reported Mrs. S, 33 years old, 18 weeks pregnant, came with history of itchy patches appeared 8 months ago along with her husband and abortion 1 year ago. The plantar pedis dextra et sinistra showed multiple hyperpigmented macules and no clinical founding in the vagina. Serological tests, reactive Venereal Disease Research Laboratory (VDRL) 1:32, Treponema pallidum hemagglutination (TPHA) >1:5120 and non-reactive human immunodeficiency virus (HIV), support the diagnosis of latent syphilis. Patients were injected with benzathine penicillin 2.4 million units 3 times (1 week apart). Serological test evaluated at months 1, 3 and 6. At month 6, there was a decrease in VDRL value 4 times the initial value, indicating successful therapy in laten syphilis and had received therapy according to the guidelines for late latent syphilis. Syphilis in pregnancy can cause congenital syphilis in the fetus, although latent syphilis has no symptoms. The patient's VDRL titer was reactive in early latent syphilis (>1:8), but based on history and duration of infection more than 1 year including late latent syphilis. Based on this case report, we found that the VDRL titer value did not always correspond to the duration of infection.

Sifilis merupakan infeksi menular seksual kronis dan sistemik akibat bakteri Treponema pallidum. Prevalensi sifilis menurut WHO yaitu sekitar 12 juta kasus di seluruh dunia dan pada ibu hamil sekitar 1,8 juta kasus. Skrining pada kehamilan penting untuk memutus rantai penularan sifilis kongenital. Tujuan pelaporan kasus ini adalah melaporkan kasus sifilis laten lanjut pada kehamilan dengan titer VDRL reaktif pada sifilis laten dini. Kami melaporkan Ny.S 33 tahun, hamil 18 minggu datang ke poli Kulit dan Kelamin dengan membawa hasil skrining pemeriksaan kehamilan reaktif sifilis. Riwayat pasien muncul bercak gatal 8 bulan yang lalu bersamaan dengan suami, serta riwayat abortus 1 tahun yang lalu. Pemeriksaan fisik pada regio plantar pedis dekstra et sinistra tampak makula hiperpigmentasi multipel dan regio vagina tidak tampak adanya duh tubuh/ luka. Pemeriksaan serologis, VDRL reaktif 1:32, TPHA >1:5120 dan HIV non reaktif, mendukung diagnosis sifilis laten. Pasien di injeksi Benzatin Penisilin 2,4 juta unit sebanyak 3x (jarak 1 minggu). Evaluasi serologis pada bulan 1, 3 dan 6. Pada bulan ke-6 didapatkan penurunan nilai VDRL 4x nilai awal yang menandakan keberhasilan terapi pada sifilis laten lanjut dan pasien sudah mendapatkan terapi sesuai panduan sifilis laten lanjut. Sifilis pada kehamilan dapat menyebabkan sifilis

kongenital pada janin, meskipun pada sifilis laten tidak ditemukan gejala. Titer VDRL pasien reaktif pada sifilis laten dini (>1:8), namun berdasarkan anamnesis dan durasi infeksi lebih dari 1 tahun termasuk sifilis laten lanjut. Berdasarkan laporan kasus ini kami menemukan bahwa nilai titer VDRL tidak selalu sesuai dengan durasi waktu infeksi.

INTRODUCTION

Syphilis is a chronic and systemic infectious disease caused by the bacterium Treponema pallidum. The World Health Organization (WHO) classifies syphilis into early syphilis (<1 year) and late syphilis (>1 year) epidemiologically. Syphilis is clinically classified into primary syphilis (S I), secondary syphilis (S II), early latent syphilis (<1 year), late latent (>1 year), and tertiary syphilis (S III).[1] Clinical manifestations of secondary syphilis in patients with syphilis vary widely, can resemble skin lesions in other diseases. Skin lesions can be maculopapular, papulosquamous, or psoriasiform. Syphilis in its course can attack all organs without manifestations of skin lesions (latent period) and can be transmitted to the baby in the womb.[1] Syphilis is classified into congenital syphilis and acquired syphilis.[2,3] Latent syphilis in pregnancy, although there are no symptoms but can affect pregnancy in some cases. The risk of transmission and complications is reduced if the mother receives adequate therapy given before the second trimester.[4]

The global prevalence of syphilis according to WHO in 2012 was estimated at around 0.48% in men and 0.49% in women, while the prevalence in Southeast Asia in 2008 was estimated at around 0.39%.[5] The World Health Organization estimates the prevalence of syphilis in pregnant women to be approx. 1.8 million and less than 10% are diagnosed so that they do not receive therapy. The prevalence of syphilis in pregnancy in 2016 in Southeast Asia is estimated to be around 0.21% or 78,000 cases of all pregnancies, while the exact prevalence rate in Indonesia has never been reported before. Syphilis cases in pregnancy throughout the world are still quite high, especially in developing countries. There were an estimated 930,000 cases of syphilis in pregnancy in 2012 and in 350,000 cases there were complications due to syphilis.[2,6]

The clinical diagnosis of syphilis must be supported by appropriate laboratory findings, namely based on reactive serological tests consisting of Treponemal Treponemal Hemagglutinogen Assay (TPHA) and non-treponemal Venereal Disease Research Laboratory (VDRL) examinations. Complications of syphilis in pregnancy include abortion, neonatal death, premature birth/low birth weight (LBW) and congenital syphilis. Transmission of syphilis from mother to child can cause congenital syphilis and have a negative impact on the fetus if it is not detected and treated early. Giving therapy as early as possible before the second trimester can reduce the risk of syphilis complications and reduce the risk of therapy failure.[7,8]

CASE DESCRIPTION

A 33-years-old G4P2A1 woman who lives in Kartasura, Sukoharjo was referred from the Dermatology and Venereology Clinic, Sebelas Maret University Hospital to the Dermatology and Venereology Clinic, Dr. Moewardi with laboratory results of syphilis rapid plasma reagin (RPR) 1:16 and reactive TPHA. The patient has never been checked for complaints he is experiencing and currently the patient is 18 weeks pregnant and comes to the Polyclinic for further examination and handling.

Based on the results of the autoanamnesis of the current medical history, the patient first learned that reactive syphilis was carried out through a mandatory examination in the first trimester of pregnancy at the Puskesmas, then the patient was referred to the Dermatology and Venereology Clinic, Sebelas Maret University Hospital (UNS). Eight months before going to the hospital, the patient complained of redness on both the palms and feet that felt very itchy, but the patient thought it was caused by a food allergy so the patient bought his own itching medicine at the pharmacy. The patient did not go to the doctor for this complaint and the itching

complaint then disappeared in about a month without syphilis treatment. The patient has performed a Voluntary Counseling Test (VCT) with non-reactive HIV results.

Based on the results of autoanamnesis and physical examination, the differential diagnosis of this patient is late latent syphilis and early latent syphilis in pregnancy. A definite diagnosis is made based on a medical history, physical examination and supporting examinations in the form of a titer test from a Venereal Disease Research Laboratory (VDRL) serologist and Treponema Pallidum Hemagglutinogen Assay (TPHA). Serological examination revealed a reactive VDRL/RPR with a titer of 1:32 and a reactive TPHA >1:5120 (non-reactive normal value).

Based on the results of autoanamnesis, physical examination and investigations, we diagnosed the patient with late latent syphilis in pregnancy. Our patient was given a single injection of Benzathine Penicillin G 2.4 million units intramuscularly per week which was repeated 3 times at 1 week intervals. Therapy from the obstetrics and gynecology department was given folic acid tablets 1x400 micrograms (mcg) and zinc tablets 1x20 mg, routine control every 1 month and planned vaginal delivery at sufficient gestational age between 37-40 weeks. The patient had severe preeclampsia and premature rupture of membranes (PROM) at 36 weeks of gestation so an emergency caesarean section (SC) was performed. The baby was born a boy, birth weight 3,300 grams, body length 48 cm and Apgar value 6-7-8. There were no signs of skin or systemic disorders in the baby.

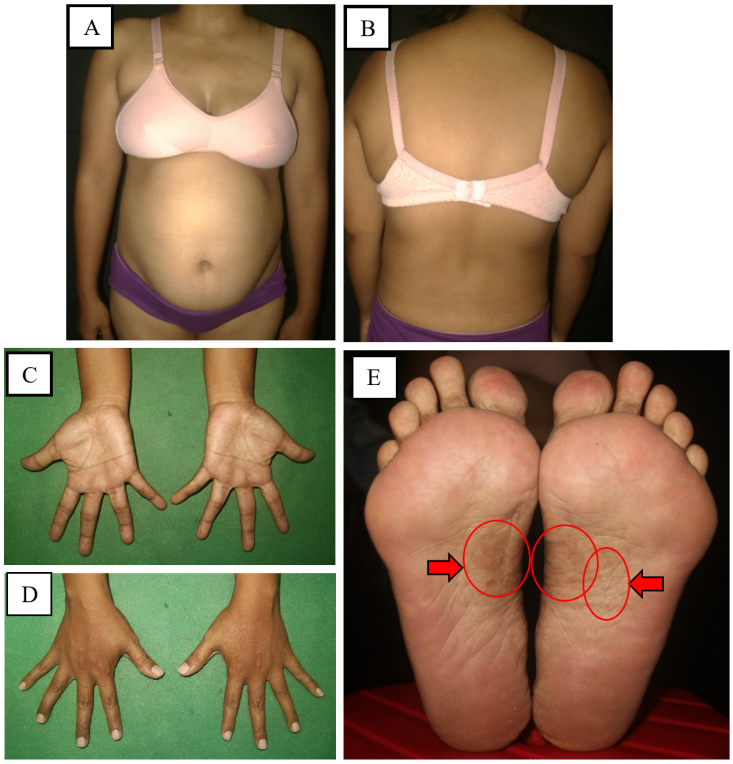

Figure 1. The truncus and manus regions had no skin lesions (A-D). The plantar pedis region contains multiple hyperpigmented macules (E, red arrow)

The results of monitoring serological examinations were carried out at the 1st, and 3rd and 6th months after the last injection. On the results of re-examination of VDRL 1 and 3 months after therapy, the VDRL titer was fixed at 1:32 and reactive TPHA 1:2560 (decreased), while on examination 6 months after the last injection, VDRL titers were 1:8 and TPHA 1:1280.

The patient experienced a decrease in titer up to 4 times on VDRL examination 6 months after therapy.

DISCUSSION

Syphilis is a sexually transmitted infection (STI) which is transmitted mainly through sexual contact either through genital, anal or oral. Syphilis in pregnancy can be transmitted from mother to baby which is called mother-to-child transmission (MTCT) and is the second most common cause of fetal death due to infection.[11,12] Complications of syphilis in pregnancy can also cause, among others, abortion, intrauterine growth restriction (IUGR) and transmission of infection to the baby after birth (congenital syphilis). Eradication of syphilis in women is a priority because women have a risk of contracting syphilis about 1.4 to 2.2% from their sexual partners and can cause congenital syphilis.[13,14]

Latent syphilis is defined by Katz as a patient with a history of syphilis or serology who has never received previous treatment and who has no clinical manifestations in the skin or other organs, in contrast to lesions in secondary syphilis.[10] Latent syphilis is divided into 2, namely early latent syphilis (< 1 year) with a titer > 1:8 and late latent syphilis (>1 year) with a titer of 1:2 or 1:4. Latent syphilis in pregnancy still has a 20 to 30% risk of transmission to the baby through the placenta even though clinically there are no symptoms.[15,16] In this patient, no active skin lesions were found and the lesions were found in the form of multiple hyperpigmented macules on the right and left soles. The patient has a history of appearing red spots on both palms and feet 8 months ago and has a history of abortion in a previous pregnancy 1 year ago, thus supporting the diagnosis of late latent syphilis even though the results of the titer examination indicate that the patient is still included in early latent syphilis because of the VDRL titer value. >1:8.

Prenatal screening examinations at Community Health Centers are the main way for the prevention and eradication of congenital syphilis because in most cases, more than 60% of pregnant women diagnosed with syphilis have no symptoms. This examination consists of serological tests for syphilis and HIV which are mandatory in the first trimester of pregnancy.[12] In this patient, there were no symptoms of active syphilis with early syphilis serologic examination reactive RPR, while the HIV examination was found to be non-reactive, then a VDRL examination with a titer result was performed. 1:32 which is serologically included in the category of early latent syphilis, but the patient had a history of abortion 1 year ago so that at that time the patient probably had a history of syphilis for more than a year so it was included in the category of late latent syphilis.

Treatment of syphilis in pregnancy does not differ from that of patients with syphilis in general and the duration of treatment depends on the duration of infection and involvement of the central nervous system. First-line therapy for syphilis in pregnancy is the injection of benzathine penicillin G (if there is no history of allergy to penicillin). Penicillin therapy for late latent syphilis recommended by the Ministry of Health and the CDC is a single injection of Benzathine Penicillin G 2.4 million international units (IU) intramuscularly repeated 3 times with an interval of 1 week.[17,18,19] Alternative therapy for patients allergic to penicillin can be given erythromycin 4 x 500 mg a day for 14 days for primary and secondary syphilis while for latent syphilis given for 30 days. Wendel et al reported that alternative therapy other than penicillin did not provide satisfactory results because it did not reduce the risk of transmission of syphilis from mother to baby, while tetracycline, which is an alternative therapy for syphilis, is not recommended for pregnant women because it can cause tooth discoloration and impaired long bone formation in the fetus.[20] In this case, the first-line therapy for late latent syphilis was an injection of benzathine penicillin G 3 times with an interval of 1 week.

The Ministry of Health and the Center for Disease Control and Prevention (CDC) recommends that clinical and serological evaluation be performed at 3, 6, 9, and 12

months in patients without complications after receiving therapy. The non-treponemal examination was performed to evaluate therapy in syphilis patients.[17,19] At the initial examination, the patient's VDRL value was reactive with a titer of 1:32. At the 1st and 3rd month VDRL examinations, the patient had not experienced a decrease in the VDRL value, while at the 6th-month examination the VDRL value was 1:8. Based on the 2013 national syphilis management guidelines by the Ministry of Health, if there is no reduction in half of the initial VDRL value 3 months after therapy, it is necessary to suspect the possibility of reinfection or leading to late latency. post-therapy to determine the success of therapy in accordance with the recommendations of the CDC syphilis therapy guidelines. On the results of the 6-month follow-up examination, our patient found a decrease in the VDRL titer value 4 times from the initial examination which indicated the success of therapy.

Conclution

In late latent syphilis, a reactive VDRL titer value with a value of >1:8 (1:32) can still be found, and to determine the success or failure of therapy, it can still wait up to 6 months after therapy. Further monitoring of the patient's serological examination still needs to be carried out at the 9th and 12th months to determine the possibility of reinfection because the patient's husband has not received treatment and the baby at the age of 6 months to determine whether there is transmission Syphilis infection in pregnancy can increase the risk of transmission so it is necessary to give therapy to prevent congenital syphilis and complications in infants .

CONFLICT OF INTEREST

No declare

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No declare

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