

A congenital syphilitic child to an adequately treated syphilitic mother

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Abstract

A mentally ill antenatal mother of 34 weeks gestation was diagnosed as a case of latent syphilis of unknown duration and was treated adequately with benzathine penicillin. One month after last dose of penicillin she delivered a male baby without any clinical or radiological evidence of syphilis, but reactive RPR in 1:64 dilution. Baby was treated as per CDC guidelines. It is also the gestational age at which the mother was treated decides the outcome in child in addition to stage of syphilis. These reported congenital syphilis cases necessitates early screening and adequate treatment of syphilis mainly in pregnancy.

Key words: Congenital syphilis, penicillin, screening

INTRODUCTION

Congenital syphilis is a severe, disabling infection that occurs due to the transmission of *Treponema pallidum* across the placenta during pregnancy or from contact with infectious genital lesions during delivery. The WHO estimated that annually 150,000 cases of congenital syphilis occur globally^[1] in 25%–75% of exposed infants.^[2] Its incidence has declined in recent years due to effective screening during pregnancy. Approximately 66% of infants with congenital syphilis are asymptomatic at birth

and are identified only by routine perinatal screening.^[3] Here, we report a case of congenital syphilis in a newborn to an adequately treated syphilitic mother.

CASE REPORT

A 38-year-old mentally ill antenatal mother was referred to the sexually transmitted diseases department for screening at 34 weeks of gestation. History could not be elicited and there were no clinical features of syphilis. Her rapid plasma reagin (RPR) test was reactive

in 1:2 dilution. The confirmatory treponema pallidum hemagglutination (TPHA) test was also positive. Lumbar puncture was done, and her cerebrospinal fluid examination was normal. She was diagnosed as latent syphilis of unknown duration and was treated with three doses of injection benzathine penicillin 2.4 MU after test dose at weekly intervals. She delivered a male baby 1 month after the last dose of injection penicillin, and the baby was referred to our department at birth. The baby was well without any clinical or radiological evidence of syphilis. However, RPR was reactive in 1:64 dilution, and TPHA was positive. Maternal RPR at the time of delivery was nonreactive. The child was diagnosed as a case of congenital syphilis and admitted in the neonatal intensive care unit. The baby was treated with injection aqueous crystalline penicillin 50,000 units/kg twice daily for 7 days followed by thrice daily for 3 more days after the test dose as per scenario 1 of the Centers for Disease Control and Prevention guidelines (serum quantitative nontreponemal serologic titer is fourfold higher than the mother's titer).^[4] The mother and the child are on follow-up.

DISCUSSION

Congenital syphilis is a severe, disabling infection that occurs due to the transmission of *Treponema pallidum* across the placenta during pregnancy or from contact with infectious genital lesions during delivery. Transmission of syphilis from mother to child occurs through three routes namely embolus of organisms carried by venous blood, through placenta, and umbilical cord perivascular lymphatics.^[5] The likelihood of transmission from mother to child is directly related to the stage of pregnancy at which the infection is acquired and the stage of syphilis. The probability of infecting the fetus in an untreated mother ranges from 70% to 100% in primary syphilis, 40% in early latent syphilis, and 10% in late latent syphilis.^[6] The transplacental transmission is highest in infectious stage within 2 years of disease due to the highest load of spirochaetes in blood.^[7] However, literature states that disease transmission will be high during

the first 4 years of syphilis.^[3] Although pregnant women can transmit the infection to the fetus as early as 9 weeks of gestation, the transmission usually takes place between 16th and 28th weeks of pregnancy. The course of maternal infection does not seem to be altered by pregnancy. The adverse outcomes of pregnancy in women infected with syphilis include early fetal loss, stillbirths, neonatal deaths, low birth weight or prematurity, neonatal infection with syphilis, and who is completely asymptomatic only with serological evidence.^[1] Adequate treatment of maternal infection in early pregnancy with penicillin has a definite preventive role in this infection. This persistence of penicillin sensitivity to syphilis is due to penicillin-binding protein TP 47 present in the organism.^[8] However, still, documented cases of congenital syphilis are prevalent. A study by Alexander *et al.* on 340 antenatal mothers treated with benzathine penicillin states that treatment of maternal syphilis prevented congenital transmission in 98% of patients representing all stages of syphilis. The treatment effectiveness was 100% in primary syphilis, 95% in secondary syphilis, 98% in early latent syphilis, and 100% in late latent syphilis.^[3] Six failed treatments were reported, of whom four were treated later than 31 weeks of gestation. Our case is also treated at 34 weeks of gestation. The congenital syphilis in our case may be due to the detection and treatment at the third trimester of pregnancy.

CONCLUSION

Cases of congenital syphilis in adequately treated syphilitic mothers are well documented. This necessitates still stringent early screening and adequate treatment of syphilis mainly in pregnancy.

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Conflicts of interest

There are no conflicts of interest.

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