

# Unknown pregnancy in a patient with latent syphilis: a case report

## Uma gravidez desconhecida numa doente com sífilis latente: relato de caso

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### Abstract

Syphilis is a sexually and vertically transmitted infection with a wide range of manifestations. Pregnancies complicated by maternal infection are at risk of adverse complications. We report a case of a 23-year-old woman diagnosed with latent syphilis at 22 weeks of gestation. The treatment was provided and the baby was born with no complications. One year before, she presented with a rash compatible with secondary syphilis and missed the follow up appointments. The aim of this report is to reinforce the importance of regular medical follow-up and universal antepartum screening to prevent maternal and fetal complications caused by syphilis infection.

**Keywords:** Syphilis; Pregnancy.

### Resumo

A sífilis é uma infeção sexual e verticalmente transmissível com manifestações diversas, estando na gravidez associada a risco de complicações. Apresentamos o caso clínico de uma grávida de 23 anos diagnosticada com sífilis latente na 22.<sup>a</sup> semana da gravidez. A terapêutica foi realizada e o bebé nasceu sem complicações. Um ano antes, a utente apresentou-se com um exantema compatível com sífilis secundária, tendo faltado às consultas subsequentes. O objetivo deste relato de caso é valorizar o seguimento médico adequado e a importância do rastreio laboratorial da gravidez de forma a prevenir complicações materno-fetais causadas pela sífilis.

**Palavras-chave:** Sífilis; Gravidez.

### INTRODUCTION

Syphilis is a sexually and vertically transmitted infection caused by the bacterium *Treponema pallidum*. The range of manifestations of the infection are wide depending upon the stage of the disease. Syphilis is generally categorized into early or late stage or neurosyphilis. Furthermore, early syphilis can be divided into pri-

mary syphilis, secondary syphilis and early latent. Late syphilis includes tertiary and late latent syphilis.

In primary syphilis, during which lymphatic and hematogenous spread occurs, usually there is a single and painless ulcer at the inoculation site accompanied by regional lymphadenopathy. This lesion spontaneously regresses and if untreated the disease progresses and turns into secondary syphilis, characterized by nonspecific systemic symptoms like fever, myalgias, odynophagia, generalized lymphadenopathy and often a maculopapular rash erythema involving the palms and soles.

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Latent syphilis develops when the disease is not treated in the earlier stages, the patient is asymptomatic and the infection is only detected by serological screening. Early latent syphilis is considered if the infection was acquired within the previous twelve months, whereas, late latent syphilis is diagnosed if present more than a year after the initial infection or if the timing of the infection is unknown.

The primary lesion chancre is not always easy to identify and clinical manifestations associated with secondary, tertiary or neurosyphilis are often unspecific. It is essential to perform diagnostic testing for syphilis following signs or symptoms suspicious of this infection. Treponemal and nontreponemal tests should be performed to confirm the diagnosis<sup>1</sup>.

Pregnancy does not change the manifestations of syphilis, however, pregnancies complicated by maternal infection are at increased risk of several adverse complications, including pregnancy loss, preterm birth, stillbirth, impaired fetal growth, congenital infection, and neonatal mortality<sup>2</sup>. Transplacental transmission to the fetus can happen at any stage of the course of maternal infection, however, the risk is higher in the first four years after maternal acquisition of the disease<sup>3</sup>.

The aim of this report is to reinforce the importance of regular follow-up of patients and the significance of universal antepartum screening.

## CASE REPORT

We report a case of a 23 year-old woman, working as a cleaning lady and living with her boyfriend and 6-year-old son. Obstetric index: 1011. Healthy, without chronic medication or knowledge of drug allergies. The patient denied any addiction or unhealthy habits, including consumption of alcohol, tobacco or other drugs. No relevant family history.

In February 2021, the patient came to an urgent appointment presenting an eight-day history of a non-pruritic skin rash, described as a diffuse macular rash involving the trunk and extremities including the palms. The patient also reported a menstrual delay. A pregnancy blood test was requested, along with the protocol for the first trimester of pregnancy, including

syphilis screening. The patient was scheduled for a new appointment and referred to a Dermatovenereology visit at the hospital, both of which she missed.

Three months later, in May 2021, the patient was brought to the emergency department after a spontaneous abortion at home. The product of conception was sent for histopathological analysis which concluded that the fetus was compatible with a gestation of fifteen weeks, with no abnormality found. The patient was referred to an obstetrics follow up appointment, which she did not attend.

In February 2022, the patient scheduled a new visit at the Family Health Unit following a positive urine pregnancy test result. The patient did not know the date of her last menstrual period, did not do the laboratory tests previously requested and denied taking penicillin. A first trimester ultrasound and laboratory evaluation were requested, which identified an approximate gestational age of 22 weeks and a positive Venereal Disease Research Laboratory (VDRL) titer of 1:8, confirmed later by the positivity of FTA-ABS and TPHA (1:5120). Following the results, a dose of Benzathine Benzylpenicillin 2.4 million I.U. was administered at the Family Health Unit and the patient was referred to an Obstetrics appointment.

During the follow up, the patient received two more doses of Benzylpenicillin and showed a decrease of VDRL titer to 1:2. The pregnancy was otherwise uneventful and the baby was born without complications after 39 weeks, with a birthweight of 3195 g. The neonate was screened for syphilis resulting in a RPR weakly reactive and TPHA titer 1:1280. Given the evaluation of low likelihood of congenital syphilis infection, a single dose of Benzathine Benzylpenicillin was administered to the infant.

## DISCUSSION

Syphilis is a disease with a wide range of manifestations, often nonspecific. These manifestations, especially in secondary syphilis, can be attributed to other causes if there is a low suspicion index for the disease. Therefore, it is essential to perform diagnostic tests in order to treat and prevent the transmission and progression of the disease.

During pregnancy, this becomes even more important since it can severely affect the fetus and the course of pregnancy. The Portuguese's Directorate General of Health established a syphilis screening in pregnancy in the first and third trimesters using VDRL.

Syphilis infection is associated with risks for the mother and the fetus, not only due to the syphilis infection but also due to the risk of developing the Jarisch-Herxheimer reaction during treatment, which can cause uterine contractility and variable decelerations.

We present a case of a patient who presented a rash compatible with secondary syphilis at her first encounter with the family doctor. She missed her follow up appointments and came back after a year, pregnant with a gestational age of 22 weeks, having had a miscarriage in the meanwhile. Hence, the diagnosis and treatment of late latent syphilis was only possible in the second trimester. This case highlights the importance of strategies to ensure the adequate follow-up of patients in order to prevent missed opportunities of early diagnosis of syphilis. In this regard, an effective articulation between primary and secondary health care can play a key role in preventing future complications, especially since women at childbearing age are a vulnerable population. In particular, it would have been beneficial to report the patient's absence to the appointment right after the miscarriage.

The aim of this report is to reinforce the importance of regular medical follow-up and universal antepartum screening, in order to prevent maternal and fetal complications including the ones caused by syphilis infection.

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## AUTHORS' CONTRIBUTIONS

AMMF: Conception of the work, draft of the manuscript, literature review. SBC: draft of the manuscript, critical review of the paper. CGM: draft of the manuscript, critical review of the paper. LFT: critical review of the paper.

## PATIENT CONSENT

Obtained.

## COMPETING INTERESTS

Nothing to declare.

## FUNDING SOURCES

The authors have not declared a specific grant for this research from any funding agency in the public, commercial or not-for-profit sectors.

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**RECEIVED:** 01/04/2023

**ACCEPTED:** 25/11/2023