

# A case report of delayed syphilis diagnosis in pregnancy

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### ABSTRACT

**Aims:** To report a case of primary genital syphilis in a pregnant woman, which is untypical due to the delayed diagnosis and course of the disease.

**Presentation of case:** We present a pregnant woman complaining of pain and growing lesion in the perineal area. She was misdiagnosed and unsuccessfully treated for the perineal abscess. The diagnosis of syphilis was delayed because of the negative prenatal syphilis test result in the first trimester. In addition to the delayed diagnosis after the correct diagnosis regardless of an appropriate treatment with benzathine penicillin G, the pain and the chancre recurred.

**Discussion:** Diagnosing syphilis may be complicated itself. In this case there were several factors that made the correct diagnosis and successful treatment even more difficult. These were: negative prenatal screening, recurrence of the symptoms after treatment.

**Conclusion:** With this case we emphasize the importance to repeat the syphilis testing if the diagnosis of syphilis is suspected, regardless of previous negative first trimester syphilis screening result.

*Keywords:* Syphilis. Primary syphilis. Syphilis in pregnancy

### 1. INTRODUCTION

Syphilis in pregnancy continues to be an important public health issue worldwide despite the well-established laboratory tests and effective penicillin treatment. [1][2] All pregnant women are tested for syphilis at the first prenatal visit and in some countries, including Lithuania, they are screened again during the third trimester. [3][4] Thanks to such prenatal screening, 63 cases of syphilis in pregnancy were diagnosed in Lithuania over a five-year period (2014-2019). In four of them congenital syphilis was confirmed. [5] Diagnosing syphilis may be complicated, because it often imitates other diseases. [6] We report a case of primary genital syphilis in pregnant woman, who was misdiagnosed several times as the physicians immediately dismissed the diagnosis of syphilis based on prenatal screening results and underestimated the need to repeat syphilis testing. In addition, despite an appropriate treatment the chancre recurred.

### 2. PRESENTATION OF CASE

A 22-year-old primigravida Lithuanian woman at 25+0 weeks of gestation was referred to our hospital for level III general surgeon consultation. She was complaining of pain and a progressively growing lesion in the perineal area, which arose 3 months ago. At first it localized in the anal area, later expanded towards vagina. Patient was consulted by II level general surgeons several times. She was diagnosed with a perineal abscess and treated with Iton Abszess-Salbe liniment, baths and compresses – without improving.

In our hospital she was examined by gynecologists. Due to the suspected syphilis the patient was referred for dermatovenerologist's consultation. After detailed physical examination dermatovenerologist also suspected that the lesion is a syphilitic chancre (Fig. 1). Regardless of the negative prenatal syphilis screening result, at the time of the visit, syphilis tests were repeated. The results were in line with the primary genital syphilis diagnosis: treponema pallidum hemagglutination assay (TPHA) was positive (4+), rapid plasma reagin (RPR) – positive with a title of 1:32, Treponemal enzyme immunoassay 22.79 (negative < 1.0). The HIV test was negative. After confirming the diagnosis an immediate antibiotic therapy was started with benzathine penicillin G, 3 doses of 2.4 million units IM, each at 1-week intervals according to the stage of syphilis, in line with CDC guidelines. During the last administration of antibiotic, the chancre and the pain were reduced (Fig. 2). At 32+1 weeks of gestation the patient arrived with the renewed complaints – pain and chancre in the perineal area. RPR was found positive with a title of 1:8 (Fig. 3). Following the results, an identical course of antibiotics was administered.



Figure 1. Chancre before the treatment



Figure 2. Chancre after the first course of antibiotics. Figure 3. Chancre at 32+1.

Fetal ultrasound was performed regularly during the treatment and after. No fetal abnormalities were detected. At 41+2 gestation weeks patient was referred to our hospital for delivery. Due to an obstetric dystocia, an emergency caesarean section was performed. The neonate was born without the signs of congenital syphilis.

### 3. DISCUSSION

Each year, there are an estimated 6 million new cases of syphilis globally in persons aged 15 to 49 years. [7] In low income countries where syphilis prevalence remains high, mother to child transmission (MTCT) of syphilis continues to be the most common cause of sexually transmitted infection (STI) related mortality outside of HIV. Perinatal deaths owing to an untreated syphilis exceed those of HIV or malaria. [6] It is proved that women screening for syphilis in the first pregnancy trimester is a cost effective strategy. [2] However, we have to bear in mind, that the *T.pallidum* has a long latent period during which patients have no signs or symptoms, but can remain infectious. [6] The average time between acquisition of syphilis and the start of the first symptoms is 21 day, but can range from 10 to 90 days. [8] That is why it is possible that women who screen negative for syphilis become positive later in pregnancy, either because they become infected with syphilis later, or because their infection was too recent for a detectable antibody response to have been mounted at the time of the first screen. [2]

In terms of the infection, infected individuals typically follow a disease course divided into primary, secondary, latent and tertiary stages over a period of  $\geq 10$  years. [2] Patients with primary syphilis present with a single chancre (which size may variate from several millimeters to 2-3 cm) or multiple lesions on the genitals or other body sites involved in sexual contact and regional lymphadenopathy  $\sim 3$  weeks post-infection. These are typically painless and resolve spontaneously in 3 to 6 weeks. [8]

### 4. CONCLUSION

In this case report, the patient was screened for syphilis in the first trimester and the test was negative. Following this result physicians immediately ruled out the possibility of syphilis

diagnosis although the lesion may have resembled a chancre. For this reason, in case when the diagnosis is not clear and clinical signs suggest syphilis, we highlight the importance of repeated testing for syphilis, even if previously certain test was negative.

In this case, patient had a single genital ulcer, but it was painful and recurred even after treatment with penicillin. Though the chancre recurred, MTCT did not happen and we tend to think that antibiotic therapy was effective at least in preventing congenital syphilis.

Congenital syphilis is still a big healthcare problem worldwide. As more and more emphasis is placed on new pathogens and diseases, old but well-known diseases are forgotten. Despite relatively clear clinical signs and easy laboratory diagnosis, it took time from the onset of the disease to the correct diagnosis. Therefore, with this case we want to emphasize the pathogenesis of syphilis and the significance to not blindly rule out the diagnosis based only on the prenatal screening results.

## CONSENT

All authors declare that written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editorial office/Chief Editor/Editorial Board members of this journal.

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