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CASE REPORT

Case report: congenital neurosyphilis

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Syphilis, Congenital, Neurosyphilis, Communicable Diseases, Treponema pallidum.

Abstract

Objective: To report a case of congenital neurosyphilis with cutaneous alteration in order to complement the literature. **Case report:** A 26-year-old, pregnant woman, gives birth to a newborn with vesicobullous lesions on the hands and feet, consistent with plantar pemphigus. Screening for congenital syphilis showed blood VDRL of 1:512 in the newborn and 1:128 in the postpartum. In the cerebrospinal fluid, on the other hand, the exam was reagent in the ratio of 1:2, being then diagnosed as congenital neurosyphilis. **Conclusion:** The importance of physical examination in pediatrics is of great value, as it can alert us to possible diagnosis. Unfortunately syphilis is once again present in our daily lives, and we can not but trace and treat it as its correct treatment can improve the quality of life or even cure the newborn.

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INTRODUCTION

Congenital syphilis (CS) is an infectious disease transmitted by the spirochetes of Treponema pallidum. These, in turn, can cross the placenta at any stage of pregnancy; however, the most potent immune response occurs between 18 and 22 weeks of gestational age, when you can see the characteristics of congenital syphilis[1]. Treponema can also invade the central nervous system (CNS), becoming known as congenital neurosyphilis, causing changes to cerebrospinal fluid (CSF), or even progressive general paralysis[2].

The late start of prenatal care, the insufficient number of consultations, the obstetric history of risk, in addition to the low socioeconomic level and/or education are risk factors, and warning signs for possible sexually transmitted diseases, including syphilis[3]. Approximately 60 to 90% of infected newborns are asymptomatic, with only the most severe cases showing symptoms. Among the most frequent clinical manifestations are syphilitic rhinitis, hepatosplenomegaly, jaundice and generalized lymphadenopathy. However, these manifestations are nonspecific and deserve a differential diagnosis with other congenital infections[1,3].

When investigating the involvement of the central nervous system, the diagnosis of probable neurosyphilis is made by the presence of pleocytosis, that is, more than 25 leukocytes in infants under 1 month of age and/or proteinorrhagia, with proteins in the CSF higher than 150mg/dL[4]. However, in order to be considered confirmed neurosyphilis, it is necessary to have the VDRL reagent in the cerebrospinal fluid, even if such examination has a sensitivity of 54% and specificity of 90%[5].

According to the WHO (World Health Organization), syphilis affects more than 1 million pregnant women per year, with more than 300 thousand fetal and neonatal deaths worldwide. Rio Grande do Sul is among the Brazilian states with the most reported cases of pregnant women with syphilis and newborns with congenital syphilis, in 2016[6].

Despite the increased incidence of congenital syphilis and/or neurosyphilis, patients are generally asymptomatic and do not have reactive VDRL in their CSF, due to its low sensitivity. Therefore, we aim to report on a symptomatic case with CSF alteration, to complement the literature.

CASE REPORT

Female newborn (NB), born vaginally in July of 2018, due to premature labor, received an Apgar of 04 and 09, in the first and fifth minutes, respectively; requiring positive pressure ventilation (PPV)) in the delivery room. Gestational age (GA) of 35 weeks and 3 days, by an early ultrasound. She weighed 2,140g at birth and measured 43cm. Upon early inspection, there were vesicobullous lesions with serous content in the palmoplantar region, which ruptured easily releasing this translucent liquid and leaving a hyperemic fundus. These lesions in turn suggested the diagnosis of palmoplantar pemphigus, which associated with the hepatosplenomegaly that the baby had, made us think of congenital diseases.

Reviewing the maternal history, we found that the pregnant woman underwent an examination for screening for syphilis during prenatal care, the VDRL (Venereal Disease Research Laboratory), showing a 1:32 titration in the third trimester of pregnancy. Treatment with 3 doses of benzathine penicillin was prescribed; however, there was no time for complete treatment, since only the first dose was given, and this occurred 3 days before delivery. Other serologies for infectious diseases were negative and the patient did not have other comorbidities. She denied using alcohol or drugs during pregnancy.

In the maternity hospital, the VDRL of the puerperal woman came with a value of 1:128, while the newborn had a VDRL of 1:512. We ordered a complete screening for congenital syphilis and neurosyphilis with complete blood count, radiography of long bones and lumbar puncture. The results showed: complete blood count with Rodwell 2, due to neutrophilia and immature increase, normal long bone radiography; however, the cerebrospinal fluid was altered. Even a collection without a puncture accident, the cerebrospinal fluid VDRL was reagent (1:2), with 25 cells/mm³ of leukocytes and 95mg/dL of proteins. (Figura 1. e 2.)



Figure 1. Desquamation in hand, evolution of bubbles with serous content.



Figure 2. Peeling feet, after rupture of serous bubbles.

In view of the clinical picture, laboratory tests and maternal history, she was diagnosed with congenital neurosyphilis, starting the treatment according to the protocol from the Ministry of Health (MS)[I] with 50,000 IU/Kg/day of intravenous crystalline penicillin for 10 days. She was discharged from the hospital with intact skin and a neurological physical examination without changes. She was submitted to outpatient follow-up and serology control, with negative VDRL in the 1st and 2nd subsequent months.

DISCUSSION

Several epidemiological studies show the increase in gestational and congenital syphilis in our country. One of them pointed out that Porto Alegre and Recife reached 18 per 1,000 live births in the year 2013[7], and we can see this increase in our daily lives, as our case reported.

A CSF showing pleocytosis (> 25 leukocytes/mL) or proteinorrhagia (> 150mg/dL) warns of a probable diagnosis of neurosyphilis; however, VDRL reagent present in the cerebrospinal fluid confirms the disease[2]. Cardoso et al. conducted a cross-sectional study analyzing 175 cases of syphilis in pregnant women and corresponding congenital syphilis, between 2008 and 2010. This study, in turn, obtained a VDRL result in the CSF of the reactive newborns in 21% of them and the majority (77.8%) had a titer higher than 1: 8 in the CSF. In addition, 36% of newborns were asymptomatic[8]. In view of this, despite having a large number of asymptomatic NBs, the prevalence of cerebrospinal fluid disorders stands out, indicating congenital neurosyphilis.

Penicillin remains the medication of choice for syphilis, and there are few studies on alternative drugs that are effective against Treponema pallidum. Therefore, patients undergoing treatment with 2nd choice medications may not be completely free of the disease[9]. The literature shows references that after 12 to 15 months of adequate treatment, the VDRL should already be negative[4] and we achieved this result in the 2nd month of life.

The vesicobullous lesions present in our newborn have some differences from those found in the literature. They commonly present as a papulosquamous rash or a scaly dermatitis involving the palmoplantar region[10]; these, in turn, in our report, were the evolution of the condition throughout the treatment (scaling), and not the initial lesions. The important thing, in fact, is to observe the changes and think about differential diagnoses that may suggest congenital diseases.

CS is a preventable, treatable and curable disease. Given the above, one cannot miss the opportunity to make the diagnosis and treat patients with the disease during prenatal consultations and/or birth at the maternity hospital, trying to extinguish syphilis again.

CONCLUSION

We conclude that congenital syphilis and neurosyphilis have returned to be a prevalent disease and that when left untreated it can cause several complications. Studies and information for the general population are part of health education and deserve greater attention when related to prenatal care and the availability of treatment.

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