



Case report

Congenital syphilis with bone lesion: case report[☆]



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ABSTRACT

The authors report a case of congenital syphilis in a newborn with a bone lesion, resulting in left ankle periostitis.

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Sífilis congênita com lesão óssea: relato de caso

RESUMO

Os autores apresentam um caso de um recém-nascido portador de sífilis congênita com lesão óssea que evoluiu com periostite no tornozelo esquerdo.

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Introduction

Congenital syphilis (CS) is a disease that seriously affects newborns (NB) in a multisystemic way; it can even be fatal. It occurs through the hematogenous transmission of *Treponema pallidum* through the placenta of untreated or inadequately treated pregnant women to their children. Albeit preventable with adequate prenatal follow-up, CS still affects many newborns in Brazil.¹

This article is aimed at reporting a case of CS with bone lesion and to emphasize the importance of this diagnosis.

Case report

The patient, pregnant, 21 years old, GIV PI AIII, resident of São Gonçalo (RJ), HIV negative serology, with positive VDRL during pregnancy (VDRL 1:32 on 01/23/15 and VDRL 1:32 on

[☆] Study conducted at Universidade Federal Fluminense, Hospital Universitário Antônio Pedro, Niterói, RJ, Brazil.

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Fig. 1 – Anteroposterior view radiographs of the legs showing lytic image in the distal metaphyseal region and diffuse periosteal reaction in the left tibia.

02/23/15). The patient was not treated during pregnancy. She was normotensive and non-diabetic.

On 02/23/15, she gave birth – by vaginal delivery – to a preterm NB (32 weeks), small for gestational age (SGA), with early respiratory discomfort requiring support with an oxygen mask.

On that day, the NB was admitted to the neonatal intensive care unit (NICU) due to the need for ventilatory support. After NB screening, which identified positive VDRL, treatment for CS was initiated with crystalline penicillin for ten days. At the age of five weeks, edema and pain on the left lower limb upon manipulation were observed; comparative radiographs of the ankles and legs were requested. Radiological alterations were observed in the left tibia, characterized by a lytic image in the distal metaphyseal region with diffuse periosteal reaction, extending to the middle third of this bone (Fig. 1).

The one-month treatment control VDRL was 1:1, and the treatment with crystalline penicillin was reinitiated for another ten days.

Until the sixth month of life, the patient was reactive to the management, without major alterations on examination. The patient was discharged at 7 months of age, with improvement of signs and symptoms and under outpatient follow-up.

On 03/12/2015, at the age of 9 months, the last control radiographs were made, which showed no bone lesion (Fig. 2A and B).

Discussion

CS transmission can occur at any gestational stage or clinical stage of maternal disease. Vertical transmission depends pri-

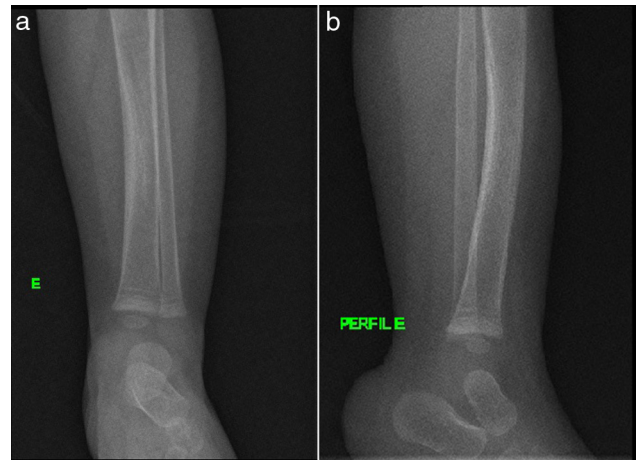


Fig. 2 – (A) Anteroposterior view radiographs of the left ankle, showing no bone changes. (B) Lateral view radiographs of the left ankle, also without bone changes.

marily on two factors: the stage of syphilis in the mother and the duration of fetal exposure in uterus.¹

CS is more likely to occur in cases of inadequate prenatal care. It is also more likely to occur in the following cases: mother with primary syphilis; presence of any maternal illness of unknown duration; high maternal titers in non-treponemal plasma tests (VDRL \geq 1:16) during treatment (or at delivery); small intervals between treatment and delivery (<4 weeks); and untreated syphilis.²

CS can be classified as early (diagnosed up to 2 years of age) and late (after this period). The main characteristics of early CS include prematurity, low birth weight, hepatomegaly with or without splenomegaly, cutaneous lesions, limb pseudoparalysis, respiratory distress, jaundice, anemia, and generalized lymphadenopathy. Furthermore, osteitis and osteochondritis are also noteworthy; they present characteristic lesions in a radiological study (as in the present case).¹ Laboratory abnormalities include anemia, thrombocytopenia, and leukocytosis or leukopenia. In the case of the present patient, the presence of a mother with untreated syphilis during pregnancy associated with clinical manifestations in the NB were sufficient to establish the diagnosis of CS. Late CS is characterized by saber shin deformity of the tibia, Clutton's joints, frontal bossing, saddle nose, deformed upper medial incisor teeth (Hutchinson's teeth), neurological deafness, and difficulty in learning.¹

Some authors believe that CS could be primarily reduced by improving prenatal care in the high-risk population and by refining case reporting in order to control syphilis infection in the community.³ Furthermore, notification of the partners of pregnant women with syphilis has been associated with a marked improvement pregnancy outcome.⁴

It is also known that the annual number of deaths due to CS competes with that of deaths caused by vertical transmission of human immunodeficiency virus (HIV).⁵ Since healthcare systems are increasingly investing in the prevention of vertical HIV transmission, it is inexplicable that this practice has not been adopted for syphilis, since the cost of preventing CS by traditional screening is much lower than that of preventing vertical HIV transmission.^{5,6}

A high level of doubt is necessary; the orthopedist should consider the possibility of CS whenever images show destructive bone lesions.⁷ It has also been demonstrated that the radiographs of long bones were abnormal in 20% of the asymptomatic NBs with positive perinatal treponemal serology.^{8,9} Bone lesions commonly affect the tibia and other long bones of the body, generally being multiple and symmetrical. The lesions can be classified as osteochondritis, osteomyelitis, and osteoperiostitis.¹⁰ In cases of bone fractures and lytic bone lesions in NBs, intrauterine infections, especially syphilis, should always be investigated as possible causes.¹⁰ Bone involvement can be very painful, causing the child to refuse to move a extremity, a finding known as Parrot's pseudoparalysis.¹⁰

Thus, considering the recent increase in the incidence of CS and the possible consequences of this disease for the NB, the medical team involved in the treatment of NB should be aware of the clinical manifestations and the silent signs of this disease.

Conflicts of interest

The authors declare no conflicts of interest.

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