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Preview Notes

Analysis of predictive factors for syphilis vertical transmission: a cross-sectional study

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ABSTRACT

Aim: to analyze the predictive factors for syphilis vertical transmission. **Method**: a an epidemiological cross-sectional, retrospective, documental study with a descriptive and analytical nature. The non-probabilistic sample will be quantified from all reports of congenital syphilis with the respective syphilis notification in pregnant women from January 2014 to December 2015 in the city of Natal / RN. The collection instrument to be used is based on the Ministry of Health protocol for investigation of cases of early syphilis. Data analysis will be supported by the description of the quantitative variables, as average, standard deviation and median, in addition to the chi-square test For hypothesis testing with significance of 95% and $p < 0.05$. The study follows Resolution 466/2012 of the National Health Council and has an opinion approved under No. 1. 449.134. **Expected results**: We hope to offer resources that allow acknowledgement of the predictive factors regarding syphilis vertical transmission.

Descriptors: Syphilis, Congenital; Infectious Disease Transmission, Vertical; Prenatal Care.

INTRODUCTION

Syphilis, despite being an infectious disease known for more than half a millennium, remains a major health problem to be tackled globally. The maternal transmission of *Treponema pallidum* to the fetus is termed congenital syphilis (CS), which presents abortion, fetal loss, neonatal death, low birth weight and newborns with clinical evidence of infection as adverse outcomes[1,2].

Among the CS predictive factors, are the late or lack of prenatal care initiation, failures in screening and early diagnosis of the disease, inadequate treatment of pregnant women and sexual partners during the gestational period, and also incomplete treatment[3]. The World Health Organization (WHO) estimates that 1.5 million pregnant women are infected with the referred disease each year. In Brazil, a rate of 7.4/1000 live births for syphilis in pregnant women and 4.7/1000 live births for the congenital disease was recorded in 2013[4].

Considering the high incidence of congenital syphilis, we formulated the following research question: Which are the predictive factors for syphilis vertical transmission?

HYPOTHESIS

The prenatal predictive factors are related to the increase in syphilis vertical transmission.

AIM

General: To analyze the predictive factors for syphilis vertical transmission.

Specific: To outline the sociodemographic and clinical profile of pregnant women and newborns with syphilis; To make an association between predictors and clinical outcomes of newborns with syphilis; To do the spatial distribution of gestational syphilis and congenital syphilis in the areas attached to the capital of the RN.

METHOD

This will be an epidemiological, sectional-type, retrospective, documentary study, with a descriptive and analytical nature. The study area will be the capital of the state of RN.

Study population will comprise all pregnant women who have been notified with syphilis, traced from the notification of congenital syphilis, as well as newborns recorded with the condition. The non-probabilistic sample will be made up of the records of all the pregnant women selected and attended at the Basic Health Units (UBSF), the notification files from the Notification of Aggravated Diseases System (SINAN) for syphilis in pregnant women and congenital syphilis, and SISPRENATAL records.

All the women reported with gestational syphilis from the notification of congenital syphilis are to be included in this. Pregnant women who have been notified with syphilis, but without notification of congenital syphilis will be excluded from the study, as well as newborns with congenital syphilis from mothers who did not undergo prenatal care, and also cases of double notification.

The timeframe for capturing data corresponds to the last two periods for consolidating the 2012-2015 Multi-Year Plan goals.

The dependent variable corresponds to newborns with congenital syphilis outcome, whereas the independent variables are the factors associated with the occurrence of vertical transmission, as follows: late prenatal onset; low number of prenatal visits; syphilis diagnosis process; treatment of pregnant women; treatment of the partner(s).

The collection instrument to be used is based on the Ministry of Health protocol for investigation of cases of early syphilis published in 2014. Data on maternal characterization regarding age, schooling, marital status, occupation and race, as well as demographic data will be collected.

Following prenatal care, the information regarding the time of diagnosis and notification of syphilis are to be extracted, as well as the clinical stage of syphilis in the pregnant woman, attendance to prenatal care appointments and the number of visits, prescribed treatment schedule, occurrence of abandonment or incomplete treatment, cause of treatment abandonment, and treponemal and non treponemal test results for serological study of the disease in the pregnant woman. As for partners, we will investigate their presence in prenatal care, treatment regimen and whether if it was concomitant with the pregnant partner's treatment course.

Data analysis will be supported by the description of the quantitative variables, using mean, standard deviation, median values and chi-square test for hypothesis testing with significance of 95% and $p < 0.05$.

The research was approved by the Research Ethics Committee (CEP) of the Federal University of Rio Grande do Norte (UFRN) under opinion No. 1 449.134 in accordance with the recommendations of Resolution 466/2012 of the National Health Council (CNS).

EXPECTED RESULTS

To provide resources that allow the acknowledgement of the factors predicting vertical transmission of syphilis, especially factors related to prenatal actions of pregnant women with syphilis in the city of Natal, in order to support the actions of health professionals and, above all, the Public Health System management to control the cases of congenital syphilis.

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