Editorial

Syphilis and Pregnancy: Till When?

In 1993, the Brazilian Health Ministry proposed the congenital syphilis (CS) elimination to occur up to 2000[1,2]. However, government goals were not reached, and CS rates remain high. Samples of Brazilian puerperal women aging from 15 to 49 years showed a prevalence rate of 1.6% for syphilis with estimates of 50,000 puerperal women with active syphilis and 12,000 live-borns with congenital syphilis (considered a transmission vertical rate of 25%). This mentioned prevalence varied from 1.9% in the Northeast region to 1.3% in the Central-West region[3].

In 2007, a study of 32,512 pregnant women submitted to prenatal screening by the Pregnancy Protection Program of Mato Grosso do Sul State (PPG-MS) covered 78 cities and reached 95% of these women[4-7]. The age of these pregnant women ranged from 15 to 38 years, averaging 24.5 ± 5.7 years, 80.3% coming from the interior of the State[4]. However, the largest population coverage in terms of diagnoses is not enough to reduce the congenital syphilis rate[8].

The prenatal assistance quality was inefficient to 512 puerperal women tested in another study focusing on the gestational syphilis. The prevalence of CS in this study was of 2.3%. Less than half of the pregnant women were treated before delivery, only one-third was properly treated for the prevention of CS, more than 50% of the partners were not treated, and more than half of the patients received neither guidance nor tracing of previous children[8].

The epidemiological situation of syphilis in Brazil during 2012 remains alarming. The detection rate in the country was of 5.0 cases per 1,000 live-borns, with higher rates in the States of Mato Grosso do Sul (13.7) and Rio de Janeiro (10.8)[9].

Concerning congenital syphilis in Brazil, the following data were observed: a rate of 3.3 in 1,000 live-borns, a highest proportion of children whose mothers aged between 20 and 29 years (52.7%), incomplete schooling between 5th and 8th grades (25.8%), and prenatal carried out (74.5%). Amongst pregnant women who received prenatal care, almost 90% were diagnosed during pregnancy, and only 11.5% of their partners have been treated[9].

In the Brazilian capital, data also showed a similar picture. The detection rate was of 2.7 cases per 1,000 live-borns in 2011. The rate of congenital syphilis in the Federal District was of 2.7 cases per 1,000 live-borns[10].

This issue of the Brazilian Journal of STD brings three interesting papers about the various aspects of syphilis in non-pregnant women[11-13]. The common point of these reports is that syphilis was not considered the initial diagnosis for any of the patients, translating a "forgetness" of the disease on the patients' propaedeutics--semiotic approach. If the condition of patients that are not in the pregnancy cycle makes diagnosis difficult, when pregnant women are considered the situation can aggravate the rate of maternal-fetal transmission.

In another study of our group in the State of Mato Grosso do Sul, which compared the syphilis infection in pregnant women in 2006 and 2011, among pregnant women with positive diagnosis for syphilis in 2006, 75% reported prenatal assistance, and in 2011, 100% related this assistance. In relation to the diagnosis of maternal syphilis in the first period (2006), 58% of cases occurred after childbirth; in the second period (2011), 66.7% occurred before delivery. Regarding the treatment, in the first period (2006), 67% of pregnant women did not carry it out properly; in the second period (2011), 66.7% carried it out adequately, seeking to prevent *Treponema pallidum* vertical transmission[14].

Due to the previously mentioned results, some considerations are needed in the approach of syphilis in pregnant women in Brazil:

- unlike other States of the country, Mato Grosso do Sul screening for syphilis in pregnant women uses specific treponemal test (ELISA syphilis) with filter paper by PPG-MS and not through VDRL test professed by the Health Ministry[4-7];
- treatment orientation for primary, secondary and tertiary syphilis in pregnant women should be re-evaluated, as the observation of primary syphilitic lesion in women is extremely difficult. Dividing the disease in stages is just didactic[11] and the secondary syphilis can simulate symptoms of atopy, allergy, urticariform reaction, and it is often not diagnosed, as reported in this number of BJSTD [11-13]. Tertiary syphilis in pregnant women is a rare event[15].

Thus, for a reduction in the rate of congenital syphilis in Brazil, it is a matter of urgency to review the protocols of assistance to pregnant women, addressed to the reality of each region. Considering the locations where prenatal screening is made through the specific treponemal test, all pregnant women with positive results should be considered a **potential risk of fetal transmissibility**, even with VDRL titles under 1/8.

It should be noted that, even untreated, one year after infection and emergence of chancre, VDRL titles are decreased. It is also possible the syphilis treatment by chance, in case penicillin benzathine is used for other indications. It should also be noted that 90% of *T. pallidum* are sensitive to 1,200,000 IU P. benzathine[15].

Furthermore, the highest categorization for the treatment of pregnant women would be the **recent syphilis** (until one year after the chancre) and **late syphilis** (one year after the chancre), instead of the clinical classification in primary, secondary and tertiary syphilis.

Finally, the strategy to be suggested for the elimination of congenital syphilis is the treatment of **all reagent ELISA syphilis positive cases** with **any reagent VDRL titles**, and **the treatment of partners without the need of specific treponemal VDRL tests requirement** or **specific treponemal tests**. Pregnant women would not be treated, even those with specific treponemal reagent test (ELISA syphilis), when fulfilled **all** requirements described below:

- to prove previous treatment with the appropriate dose of P. benzathine for late syphilis (considering that date of initial

contagion could not be estimated), of 7,200,000 UI in both pregnant women and partner;
- to ensure that neither the pregnant women nor the partner had extra marital relationship;
- to ensure that the current partner is the same partner at the time of the first treatment.

Meeting all these criteria is the only way to ensure that treatment is not carried out in pregnant women with specific treponemal reagent test.

The proposals presented in this work may seem radical, however, if we do not face the congenital syphilis according to these principles, its elimination will eternally remain a goal yet to be achieved by the public health managers over the centuries to come!

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