Pregnant Women With Syphilis: A Epidemiological Assessments

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Abstract: Syphilis continues to have epidemiological relevance, especially in some underdeveloped and developing countries. There is an estimated 1 million cases of syphilis per year among pregnant women. In this sense it is recommended that the syphilis test be offered to all pregnant women in the early stages of pregnancy. Thus, the objective of the present study is to determine the occurrence of syphilis cases in pregnant women living in the city of Juazeiro do Norte, Ceará, Brazil, by means of a serological profile. Qualitative and quantitative descriptive and experimental study was carried out, using as an instrument the analysis of samples collected in patients from a given public maternity hospital in the city of Juazeiro do Norte (CE). Through the tests performed, there was a decline in the diagnosed cases of syphilis in each considered month (May to August). Thus, it was evidenced that the VDRL test is essential for the early diagnosis of syphilis, offering these women the possibility of an adequate management of the pathological condition.

1. Introduction

The term STI (Sexually Transmitted Infection) is used to denote all infections transmitted through sexual contact. However, some of these conditions can also be transmitted from mother to child, before or during childbirth, or by transfusion of contaminated blood. More than thirty infectious agents may be responsible for the onset of STI, comprising viruses, bacteria, fungi and protozoa[¹,²].

An example in this regard is syphilis, systemic infectious disease, a chronic disease caused by a bacterium called Treponema pallidum. It is a sexually transmitted disease (acquired syphilis) and vertically (congenital syphilis) from the placenta of the mother to the fetus. Contact with contagious lesions (hard cancer and secondary lesions) by the genitals accounts for 95% of cases of syphilis. Some forms of transmission that are rare and of less epidemiological interest are indirect (contaminated objects, tattooing) and by blood transfusion[³, 4, 5, 6].

Syphilis, although known to humankind for several centuries, is still a growing challenge, thus considered in some underdeveloped and developing countries as the main public health problem[⁷,⁸]. According to the World Health Organization, the estimate is approximately 12 million new cases of infected people per year and there are an estimated 1 million cases of syphilis per year among pregnant women[⁶,⁹].

In this sense, the Ministry of Health recommends that the syphilis test should be offered to all pregnant women in the early stages of pregnancy, and recommended the rapid screening test for syphilis at the first prenatal visit or requested VDRL / RPR[¹⁰]. The use of rapid tests for the diagnosis of syphilis infection during pregnancy has proven to be an effective strategy in the implementation of new approaches for the rapid and effective diagnosis of this infection during prenatal care and delivery[¹¹,¹²].

Thus, it is necessary to investigate the prevalence of gestational syphilis, the serological profile of this population and the possibility of selecting laboratory tests. Bringing to this study the objective of determining the occurrence of syphilis cases in pregnant women in the city of Juazeiro do Norte, Ceará, Brazil, a city located in the northeast of the country.

2. Materials and Methods

In order to reach the proposed objectives, a qualitative and quantitative descriptive and
An experimental study was carried out, using as an instrument the analysis of samples collected in patients from a given public maternity hospital in the city of Juazeiro do Norte (CE). The data obtained were analyzed in a laboratory of the municipality, and 459 pregnant women participated in the study, with written authorization from the hospital institution, as well as from the participants.

3. Results and Discussion

It was noticed that the majority of the pregnant women presented socioeconomic risk, generally adolescents between 12 and 16 years old and non-educated. It should also be pointed out that they had maternal antecedents, abortions, hemorrhages among other gestational problems.

When the qualitative test for syphilis was carried out, the results showed that among the pregnant women who were adequately hospitalized (465 patients in the general total), 6 presented a positive test result. This represents 1.29% of the reactive cases. Therefore, the quantitative test was performed to verify the positive or negative positivity value, strong or weak, being 1:2, 1:4, 1:8, 1:16, 1:32. Positive pregnant women (Table 1).

Table 1: Number of reactive cases in May.

<table>
<thead>
<tr>
<th>May</th>
<th>Non-reactive</th>
<th>Reactive</th>
<th>Pregn.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualitative Test</td>
<td>459</td>
<td>0</td>
<td>459</td>
</tr>
<tr>
<td>Quantitative Test</td>
<td>0</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>459</td>
<td>6</td>
<td>465</td>
</tr>
</tbody>
</table>

In turn, in June of the same year, it was found that the total of 385 sera collected from pregnant, only 4 of them showed up reagents, indicating 1.04% of positive cases. In parallel with the previous month, there was a slight decrease in cases of syphilis at the Hospital Unit where the research was carried out (Table 2).

Table 2: Number of reactive cases in June.

<table>
<thead>
<tr>
<th>June</th>
<th>Non-reactive</th>
<th>Reactive</th>
<th>Pregn.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualitative Test</td>
<td>381</td>
<td>0</td>
<td>381</td>
</tr>
<tr>
<td>Quantitative Test</td>
<td>0</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>381</td>
<td>4</td>
<td>385</td>
</tr>
</tbody>
</table>

Continuing the analysis of the tables, it was possible to verify that of the total of 416 samples, only 4 were considered reagents, indicating 0.96%. This clearly demonstrates that in the month of July or reduction in syphilis cases of the unit already mentioned. It is worth remembering that the qualitative test is done with all pregnant women, unlike the quantitative test, performed only with those that had a positive (positive) result (Table 3).

Table 3: Number of reactive cases in July.

<table>
<thead>
<tr>
<th>July</th>
<th>Non-reactive</th>
<th>Reactive</th>
<th>Pregn.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualitative Test</td>
<td>412</td>
<td>0</td>
<td>412</td>
</tr>
<tr>
<td>Quantitative Test</td>
<td>0</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>412</td>
<td>4</td>
<td>416</td>
</tr>
</tbody>
</table>

Finally, in the last month of data collection, August, there was a further decrease, out of 395 pregnant women, only 3 were considered as reagents, indicating 0.76% of the positive cases. According to the analysis of the tables, there is a decrease in the occurrence of syphilis in the hospital unit (Table 4).

Table 4: Number of reactive cases in August.

<table>
<thead>
<tr>
<th>August</th>
<th>Non-reactive</th>
<th>Reactive</th>
<th>Pregn.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualitative Test</td>
<td>392</td>
<td>0</td>
<td>392</td>
</tr>
<tr>
<td>Quantitative Test</td>
<td>0</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>392</td>
<td>3</td>
<td>395</td>
</tr>
</tbody>
</table>

Thus, the graph shows a decline during the period from May to August 2009. It is noticed that in May the index is high, in the month of June the index of pregnant women with syphilis decreased, remaining the same index in the month of July, and finally, in August a further decrease was observed (Figure 10).
In this sense, according to Resolution n° 41 of 03/24/2005, a non-treponemal test (VDRL) should be offered at the first prenatal visit for all pregnant women, preferably in the first trimester of pregnancy and at the beginning of the third trimester. At maternity, VDRL should be performed on all women admitted for childbirth (stillborn or stillbirth) or curettage (after abortion).

In the case of mothers with VDRL reagent during pregnancy or delivery, peripheral blood should be collected from the newborn for a non-treponemal test and the general assessment of the child should be made on the request of cerebrospinal fluid, X-ray of long bones and hemogram. The drug of choice for the treatment of pregnant women considered to be infected is penicillin, which crosses the transplacental barrier. According to Brazil [13], the treatment of syphilis during pregnancy is the same as for syphilis acquired in accordance with the stage of the disease.

The cure control should be monthly and performed through the VDRL, considering appropriate treatment response, declining titres. The treatment of the pregnant woman will be considered appropriate when complete according to the stage of the disease, made with penicillin, completed within 30 days before delivery and the partner treated concomitantly. Pregnant woman who has been proven to be allergic to penicillin after a drug sensitivity test should be desensitized and then treated with penicillin [13].

If this is not possible, the mother should be treated with Ceftriaxone, as previously seen, but will not be considered adequately treated for fetal transmission and the investigation and appropriate treatment of the child will be mandatory soon after birth.

It is important to note or attach in the pregnant woman's wallet the number of the Monitoring System of the Prenatal and Birth Humanization Program (SispreNatal), the result and dates of the serologies, as well as the drug, dose and date (“3 Ds”) Of the treatment performed on the pregnant woman and her partner.

The pregnant woman should be directed to have the wallet in her possession at the time of delivery. The challenge for public health is to increase the coverage and quality of prenatal care, to increase the laboratory diagnosis of Treponema pallidum and the consequent treatment during prenatal and at the time of delivery [13].

4. Conclusion

In view of the results obtained in this study, it was possible to conclude that despite the screening of syphilis in pregnant women by public hospitals and the government’s goals for the eradication of Congenital Syphilis, the pathology still persists.

New health measures and policies are needed to address this public health problem, aiming for an increase in the care of pregnant women and a prenatal care based on the care of women in their context, not forgetting to have a greater dedication in relation to taking more Information on how to prevent the disease.

It is possible to reduce the lack of information, even from the symptoms themselves, to the infected, as there are still cases in which the patient moves to an advanced stage of syphilis by ignoring the symptoms due to the lack of information about the disease. It is important that the pregnant woman has a gestation accompanied throughout prenatal, not to put their life at risk, nor of its concept.

It was also verified that the VDRL test is essential for the early diagnosis of syphilis, as well as it is important for hospitalized pregnant women, considering that these patients are not favored in the socioeconomic aspect. It is worth stressing the importance of this test, because, in addition to its effectiveness, it has a small cost compared to the others. With this, syphilis can be diagnosed and the level of post-treatment syphilis can be controlled, pós-tratamento.

5. References


