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The incidence of syphilis in the State of Pernambuco in the period 2015-2017

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Abstract: With the role of nurses in Health Education, there is a decrease in cases of diseases that can be avoided, in the case of sexually transmitted infections from 2016 to 2017, it was notorious that the population is becoming aware, through the lectures that are offered and given in the USF's. To analyze the incidence and prevalence of syphilis in the State of Pernambuco from 2015 to 2017. Methods Cross-sectional, quantitative, descriptive work with secondary data obtained through SES-PE, Sinan and SINASC/State Program of STIs/AIDS/HV/DGCD/SES/PE on congenital syphilis and acquired in the years 2015 to 2017, these data provided are preliminary and gender and age group were established. Until September 11, 2017, Pernambuco recorded

1,022 cases of congenital syphilis, when transmission occurs from mother to baby during pregnancy. In all of 2016 there were 1,507 cases and in 2015, 1,363. The disease is easy to diagnose and has treatment available free of charge in the Unified Health System (SUS). In addition to cases of congenital syphilis, SES also records the occurrences in pregnant women and in the general (acquired) public. In the case of pregnant women, there were 870 cases in 2015, 953 in 2016 and 835 in 2017 (up to 11.09). In relation to acquired syphilis, there were 1,319 cases in 2015, 2,657 in 2016 and 1,829 in 2017. The results of this research, considering the proposed objectives, indicate that the number of inhabitants in general (men and women) including pregnant women and children, have had a significant decline for individual and population health, of sexually transmitted infections. This decrease is most likely given by nursing care with lectures, and prevention alerts of STIs.

Keywords: Syphilis. Sexually Transmitted Infection (IST). Nurse's Performance

1. Introduction

Sexually transmitted infections (STIs) have been known since antiquity. These have accompanied humanity since the evolution of the human species. Syphilis is a systemic infectious disease, of chronic evolution and caused by *Treponema pallidum*, a spirochete bacterium of sexual and vertical transmission, which can produce, respectively, the acquired and congenital forms of the disease (BRASIL, 2016).

Congenital Syphilis is a disease caused by *Treponema pallidum*, which spreads hematogenous, infecting the fetus through the placenta, due to the infected pregnant woman being treated or wrongly treated. Such transmission is possible at any stage of pregnancy, being more likely to occur in the first or second phase of the disease, and may reach 100% probability of vertical transmission. There is also a chance of direct contamination of *T. Pallidum* into the conceptus during the passage through the delivery channel, since there are genital lesions in the pregnant woman. As for breastfeeding, transmission is also feasible, as long as breast lions are present (MINISTRY OF HEALTH, 2016; SERAFIM et al., 2014).

Regarding the measures to control congenital syphilis in prenatal care, the Ministry of Health recommends that after reception and counseling, the VDRL test should be carried out at least twice during pregnancy, one in the first consultation and another in the third trimester of pregnancy. VDRL in the third trimester allows maternal treatment to be completed 30 days before delivery, ensuring a minimum interval required for the newborn to be treated intrauterine. The objective is to provide an interruption of infection and reduce irreversible sequelae, favoring the early treatment of the newborn (BRASIL, 2013).

In Brazil 2015, there are about 65,878 cases of *Treponema pallidum* acquired in the country. In the same period, the detection rate was 42.7 cases per 100,000 habitants, most of them in men totaling 136,835 cases 60.1%." From 2010 to June 2016, a total of 227,663 cases of acquired syphilis were recorded (BRASIL, 2016).

It is of great importance to study syphilis, mainly because it is a disease that can be transmitted from the mother to the fetus, this fact is due to the absence of adequate prenatal care, that is, the mother did not do the treatment effectively or the partner, and thus can infect the fetus. In the case of pregnant women, transmission is potential when it is in the primary or secondary stage of the disease, and this can lead to abortion,

stillbirth or even the NB (newborn) presents serious complications, such as: nerve, cutaneous, bone, hematological abnormalities or may lead to death. Fetal or perinatal death occurs in 40% of children infected from mothers with recent untreated syphilis (CLEMENTE et al., 2012).

Although congenital syphilis presents a simple and low-cost diagnosis and treatment, it is a serious public health problem in the world, mainly due to socioeconomic, cultural, structural factors of the population and sexual factors. There is difficulty in the clinical diagnosis of syphilis in pregnant women, since hard cancer does not cause symptoms and is usually located in places of limited visualization: vaginal wall, cervix or perineum (BRASIL,2015).

This article aimed to analyze the incidence of syphilis in the State of Pernambuco in the period 2015-2017, following the work that the Ministry of Health has developed, with campaigns in the FUS of the municipalities.

2. Methodology

The work was cohort type, transversal with quantitative approach. Data were collected through secondary databases, obtained through the programs: SINAN and SINASC/State Program of IST/AIDS/HV/DGCDA/SES/PE on syphilis in multihemes, female, by age group, in children under 1 year old up to over 80 years, male, under 1 year old up to over 80 years of age. Gestational syphilis described in 2015, 2016 and 2017. Recent and late congenital syphilis, abortions and stillbirth due to syphilis in the years 2015 to 2017.

3. Results and Discussion

Based on the data collection in cases of syphilis acquired the age group from 20 to 29 years in males becomes more incident in 2016, compared to the female gender of the same age group. In the age group from 30 to 39 years, the case indexes are similar as shown in Table 1. In this same table, the rate of children younger than 1 year of both sexes shows a higher incidence of cases, with the difference of only 13 cases in total.

Table 1. Data on incidences of syphilis in females by syphilis age group of the years 2015, 2016 and 2017.

Sex	Age group	2015	2016	2017	Total	Incidence
Female	Less than 1 year	14	26	9	49	
	1 to 4 years	0	0	1	1	
	5 to 9 years	1	1	2	4	
	10 to 14 years	9	19	12	40	
	15 to 19 years	105	212	133	450	
	20 to 29 years old	255	384	268	907	
	30 to 39 years old	168	259	168	595	
	40 to 49 years old	106	161	111	380	
	50 to 59 years	77	136	71	284	
	60 to 69 years old	31	44	31	106	
	70 to 79 years old	9	13	12	34	
	80 years and older	1	3	2	6	
	Total	776	1258	820	2.856	

Source: SINAN/State STI/AIDS/HV/DGCDA/SES-PE Program *Data updated on September 11, 2017.

In cases of syphilis in pregnant women according to Table 2, it was possible to observe that in 2015 870 cases were reported and detection rate of 6.00, already in 2016 there was a significant increase, there were 953 cases and detection rate 7.29, and in 2017 until 11/09/2017 there was a decline, 835 cases were reported and the detection rate has not yet been defined because it has not ended this year. Table 1 presents the dados of the incidence of syphilis in male sex by syphilis age group of the years 2015, 2016 and 2017 (NEWMAN *et al.*, 2013).

Sex	Age group	2015	2016	2017	Total	Incidence
Male	1 to 4 years	1	0	3	4	
	5 to 9 years	0	1	1	2	

10 to 14 years	2	7	3	12
15 to 19 years	57	133	96	286
20 to 29 years old	171	470	412	1.053
30 to 39 years old	126	321	245	872
40 to 49 years old	64	208	117	389
50 to 59 years	57	148	77	282
60 to 69 years old	27	64	29	117
70 to 79 years old	12	24	8	44
80 years and older	5	6	8	19
Subtotal	541	1.399	1.009	2.949

Source: SINAN and SINASC/State STI/AIDS/HV/DGCDA/SES/SES-PE Program *Data updated on September 11, 2017.

Table 2. Number of cases and rate of syphilis detection in pregnant women in the years 2015, 2016 and 2017.

Year of notification	Number	Detection rate
2015	870	6,00
2016	953	7,29
2017	835	-
Total	2.658	-

Source: SINAN and SINASC/State STI/AIDS/HV/DGCDA/SES/SES-PE Program *Data updated on September 11, 2017.

A survey of cases of second final diagnosis of congenital syphilis was made, where the total number of recent congenital syphilis was 3,532, late congenital syphilis was 11 cases, total number of abortions was 142 and stillborn the total number was 207 cases, according to table 3.

Table 3. Diagnosis of recent syphilis, late syphilis, abortion and stillbirth by pathology from 2015, 2016 and 2017.

Final diagnosis	2015	2016	2017	Total
Recent congenital syphilis	1.221	1.359	952	3.532
Late congenital	5	6	0	11

syphilis				
Abortion	54	55	33	142
Stillborn	83	87	37	207
Total	1.363	1.507	1.022	3.892

Source: SINAN/Program IST/AIDS/HV/DGCDA/SES/SES-PE *Data updated on September 11, 2017.

According to Chequer, 2012, in the number of cases and incidence coefficient, for every 1,000 live births of congenital syphilis according to the year of diagnosis, in 2016 there was an increase in the number of cases that has a coefficient of 11.53 compared to 2015, in relation to 2017 there was a decline even without the completion of the data collection, there were 1,022 cases, as seen in Table 4.

Table 4. Number of cases and incidence coefficient (per 1,000 live births) of congenital syphilis according to the year of diagnosis.

Year	n	c.i
2015	One, I'm sorry. 363	9,40
2016	One, I'm sorry. 50th	11,53
2017	One, I'm sorry. 021	-
Total	3.892	-

Source: SINAN and SINASC/State STI/AIDS/HV/DGCDA/SEVS/SES-PE *Data updated on 11/09/2017.

In Brazil, in 2015, the detection rate of syphilis was 11.2 cases per 1,000 live births, considering a total of 33,365 cases of the disease. From January 2005 to June 2016, 169,546 cases were reported. Regarding congenital syphilis, in neonates, in 2015, 19,228 cases were recorded, an incidence rate of 6.5 per 1,000 live births (BRASIL, 2016).

In the State of Pernambuco in 2015, the detection rate of syphilis was 9.4 cases per 1,000 live births, with a total of 1,363 cases of pathology.

According to the World Health Organization (WHO, 2015) recorded 937,000 cases of syphilis in Brazil per year. In 2015, 363 cases of syphilis were recorded, a 58% increase in relation to 2014. In Pernambuco, 160 mothers were registered in treatment, 16 abortions and 13 newborn deaths were recorded in Pernambuco. In 2016, 350 cases of VRDL + of these cases were reported in Pernambuco, only 258 were reported and 160 are in treatment.

In 2016 the Ministry of Health with the main objective of further intensifying the fight against syphilis, at that time, aiming to mobilize managers and health professionals from all areas, for the importance of detecting and treating syphilis during prenatal care, based on WHO guidelines, and this act began on 10/15/2016, by virtue of Law 13,430, promulgated on March 31, 2017, which further corroborated the growing situation worldwide of *Treponema pallidum* cases, the following primary acts to be performed were established: encouraging early prenatal care, even in the first trimester of pregnancy; expanding diagnosis (by rapid testing); timely

treatment for pregnant women and her partner; encouraging the administration of *benzathine* penicillin, considered the only safe and effective medicine to prevent congenital syphilis. There will also be permanent education actions to qualify Geist sand health professionals (BRASIL, 2016).

According to the articles studied, congenital syphilis is a public health problem and a marker of the quality of maternal-fetal health care, which causes an increase in the rate of morbidity, maternal, fetal and perinatal mortality in pregnant women with syphilis (BRASIL, 2013).

4. Conclusion

The results of the research indicate that the number of inhabitants in general (men and women) including pregnant women and children, had a significant decline for individual and population health, of STIs. The decrease is most likely due to health actions aimed at the care, prevention and treatment of the pathology. It is necessary to warn the population more and more about the disease and increase the number of actions to promote health.

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