

## Epidemiologic Aspects of Syphilis among Pregnant Women in the Republic of Sakha (Yakutia)

Snezhana S. Sleptsova, PhD, ScD\*; Lyubov I. Petrova;  
Maksim N. Andreev; Anastasiya N. Petrova

*M.K. Ammosov North-Eastern Federal University  
Yakutsk, the Republic of Sakha (Yakutia), the Russian Federation*

### Abstract

The article is devoted to the analysis of the syphilis morbidity rate in pregnant women in Yakutia. Syphilis morbidity in Yakutia in 2014-2016 did not have a sustainable trend toward decreasing in comparison with the Russian Federation mean indicators. (*International Journal of Biomedicine*. 2018;8(1):81-82.)

**Key Words:** syphilis • pregnant women • newborns • morbidity rate • congenital syphilis

### Introduction

According to the Ministry of Health of the Russian Federation, the highest syphilis morbidity in pregnant women was registered in 1997 (277.3 per 100,000). By 2016, the syphilis morbidity rate decreased and fell to 21.3 per 100,000.

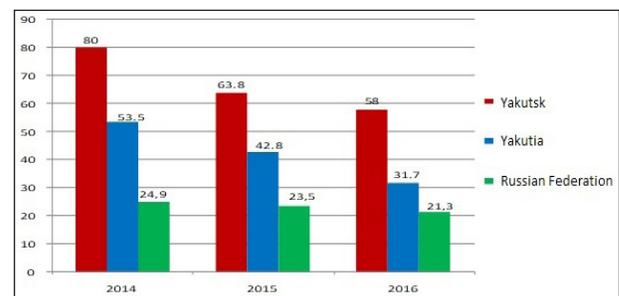
Unfortunately, the decreasing syphilis morbidity rate did not solve a problem associated with treatment of pregnant women with syphilis and a high infection risk for newborns. Some authors have noted the involvement of pregnant women and newborns in epidemical processes with direction to high morbidity in these groups in different regions.<sup>(1,2)</sup>

The aim of our study was to assess the syphilis morbidity rate in pregnant women in Yakutia according to information of the Yakut Republican Dermato-Venerologic Center in 2014-2016.

### Results and Discussion

Features of Yakutia that should be taken into account when planning medical care are extremely harsh climate, low and unequal population density (0.1-0.9 per 1 km<sup>2</sup>, undeveloped communications, the low capacity of hospitals, and long distances. Syphilis morbidity in Yakutia in 2014-2016 did not have a sustainable trend toward decreasing in

comparison with Russian Federation mean indicators (Fig.1). According to data, the active population of reproductive age was involved in the epidemic process. The highest morbidity rate was found in the 21 to 29-year-old age group (55.2-58.2%). In pregnant women, the highest morbidity was also in the same age group. In 2015, 10% of underage women were diagnosed with syphilis. Every year, syphilis was diagnosed in pregnant women of 40 years of age and older, reflecting the tendency towards late pregnancy. The highest syphilis morbidity (41.5%) among pregnant women was registered in 2014. In 2016, we observed a decrease in the morbidity rate of 4% in the past year (26.7% vs. 30.7% in 2015). The majority of these women have been directed to the Center by ob/gyn doctors (85% in 2015, 88.8% in 2016, and 81.4% in 2014). In 2016, 11.1% of pregnant women came directly, and 14.8% in 2014. During medical dyspanseration, syphilis was diagnosed in 5% of cases in 2015 and in 3% of cases in 2014.



**Fig. 1.** Syphilis morbidity in Yakutsk city, the Republic of Sakha (Yakutia), and the Russian Federation (per 100 000).

\*Corresponding author: Prof. Snezhana S. Sleptsova, PhD, ScD. M.K. Ammosov North-Eastern Federal University. Yakutsk, the Sakha Republic, Russia. E-mail: [sssleptsova@yandex.ru](mailto:sssleptsova@yandex.ru)

During the 3-year period, about of 41,5% of cases were diagnosed in the second trimester (51.8% in 2014), 33.8% of cases in the first trimester (25.5% in 2014, 30% in 2015, and 50% in 2016) and 24.6% in the third trimester.

The social status of pregnant women with syphilis was as follows: 55%-61% of women were married; 77.7% of women had a middle educational level; 37.8% were unemployed; 65% of women were childless at the time of the current pregnancy; and 26.4% of women had children. The latent (hidden) stage of syphilis was identified in 62% of cases. We observed a tendency towards an increase in the hidden stage of syphilis: 54% in 2014, 60% in 2015, and 72% in 2016. Simultaneously, secondary syphilis decreased (40% in 2014, 22.5% in 2015, and 18.5% in 2016).

One of main prevention measures in the fight against syphilis is the detection of the source and treatment of all cases and contacts. We analyzed about 45% of detected sources in 2014, 61.1% in 2015, and 62.9% in 2016. Among pregnant women with untreated early syphilis who did not receive *adequate* therapy, we observed high fetal and neonatal mortality rates. According to our study, all of the observed women gave birth. Between 2014 and 2016, we had no medical abortions or miscarriages, but the premature birth rate was 7.6%. Every year, about 83.3%-96.2% of pregnant women received specific and preventive treatment. Untreated cases were related to premature births.

Congenital syphilis is an indicator of inadequate antenatal care services and poor quality of programmes to control sexually transmitted infections.<sup>(3-5)</sup> We identified one case of congenital syphilis in 2016 vs. 17 cases in 2014. Thus, the data obtained require further studies on epidemiologic features of syphilis prevalence in Yakutia.

## Competing interests

The authors declare that they have no competing interests.

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