МИКРОБИОЛОГИЯ, ЭПИДЕМИОЛОГИЯ И КЛИНИЧЕСКАЯ ЛАБОРАТОРНАЯ ДИАГНОСТИКА

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ЭПИДЕМИОЛОГИЧЕСКАЯ ХАРАКТЕРИСТИКА ВЕТРЯНОЙ ОСПЫ СРЕДИ НАСЕЛЕНИЯ Г. ЕКАТЕРИНБУРГ ЗА 2019-2021 гг.

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Аннотация

Введение. Недостаточная иммунизация населения против ветряной оспы может привести к обострению эпидемиологической ситуации. **Цель исследования –** изучить эпидемиологическую характеристику и меры профилактики ветряной оспы среди населения МО Екатеринбурга за 2019-2021 год. **Материал и методы.** В работе использованы данные официальных форм государственной статистической отчетности (формы № 1, № 2) «Сведения об инфекционных и паразитарных заболеваниях» за период с 2019 по 2021 годы, а также были изучены основные характеристики эпидемического процесса ветряной оспы среди населения МО г. Екатеринбург. **Результаты.** По результатам эпидемиологического анализа установлено, что за период с 2019 по 2021 гг. заболеваемость ветряной оспой среди населения МО г. Екатеринбург увеличилась в 1,2 раза. **Выводы.** Необходимо добиваться санитарно-гигиенического просвещения населения о профилактики вакцинации.

Ключевые слова: ветряная оспа, заболеваемость, вакцинопрофилактика.

EPIDEMIOLOGICAL CHARACTERISTICS OF CHICKENPOX AMONG THE POPULATION OF YEKATERINBURG FOR 2019-2021

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Abstract

Introduction. Insufficient immunization of the population against chickenpox can lead to an aggravation of the epidemiological situation. **The purpose of the study** is to study the epidemiological characteristics and prevention measures of chickenpox among the population of the Yekaterinburg MO for 2019 - 2021. **Material and methods.** In this work we used information from official forms of state statistical reporting (forms № 1, № 2) "Information about infectious and parasitic diseases" for the period from 2019 to 2021 and studied the main characteristics of the epidemic process of chickenpox among the population of the city of Yekaterinburg. **Results.** According to the results of the epidemiological analysis, it was found that for the period from 2019 to 2021, the incidence of chickenpox among the population of

Yekaterinburg increased 1,2 times. **Conclusions.** It is necessary to achieve sanitary and hygienic education of the population about the prevention of vaccination.
Keywords: chickenpox, morbidity, vaccination prevention.

INTRODUCTION

Chickenpox is an acute human infectious disease with an aerogenic mechanism of transmission of the pathogen, caused by the Herpes zoster virus. Chickenpox can affect both children and adults. It is much easier to recover from this disease at an early age, than being an adult. The source of infection are patients with chickenpox and shingles, patients with chickenpox become contagious at the end of the incubation period.

The infection is transmitted in 3 different ways:

1. by airborne droplets - (when talking, sneezing, coughing, kissing);
2. by contact - (when the patient's saliva or the contents of the vesicles get on unaffected skin);
3. transplacental - (from a pregnant mother to a fetus, if a woman in this period fell ill with either chicken pox or herpes zoster).

With age, the risk of complications and mortality can increase up to 50%, provided that the affected adult did not have chickenpox before or was not vaccinated. Secondary skin infection, pneumonia, varicella encephalitis, cerebellar ataxia, damage to the facial nerve, and eye damage are often recorded as complications. Chickenpox can also cause damage to the fetus or newborn when a woman develops chickenpox in the first 20 weeks of pregnancy or in the last days before delivery [2].

Vaccination against varicella in children and adults provides an opportunity to prevent these consequences.

The purpose of the study - to show the percentage of the vaccinated population of the municipality of Yekaterinburg, analyze the immunological state of the population and identify the risk group.

MATERIAL AND METHODS

Based on data from the report "Information on infectious and parasitic diseases" for the period from 2019 to 2021, chickenpox ranks the third in the structure of all infectious diseases without influenza and SARS. 19741 cases of chickenpox were registered (an indicator of 470.9 per 100 thousand of the population), which is 12.0% higher than the level of 2020, 1.7 times lower than the level of 2019, 1.7 times lower than the annual mean index, 1.3 times higher indicator for the Russian Federation. In 98.1% of cases, the diagnosis was made in children under 17 years of age [1]. The highest incidence rate was registered among organized children under 2 years old (6085.4 per 100 thousand population) and organized children 3-6 years old (5437.9 per 100 thousand population). In total, 3057 people were vaccinated in the region in 2021, twice - 1273 people, which is extremely insufficient. According to the results of the data, it was revealed that in 2021 the percentage of sick organized children was 69.7% (2020 - 66.4%, 2019 - 63.5%), the proportion of schoolchildren - 14.2% (2020 - 17.8%, 2019 - 17.8%), unorganized children - 14.4% (2020 - 13%, 2019 - 14.5%). Thus, in the structure of morbidity, a

group of preschool children in an organized team plays a leading role. [3]. In the second place there are organized schoolchildren, since immunity is formed by school age. Slightly lower incidence was noticed among unorganized children.

As in previous years, the rate of immunization against chickenpox was lower, in 2021 3153 children were vaccinated (in 2020 - 4417 children, in 2019 - 1182 children). As on 01.01.2022, vaccination coverage of the population of Yekaterinburg was 2.9% (as on 01.01.2021 - 2.8%), including children aged 1–14 years - 12.2% (as on January 1, 2021 - 11.84%).

In 2021, serological studies were not carried out to study the intensity of post-vaccination immunity of the population of Yekaterinburg against chickenpox in children. At the end of 2020, the proportion of seronegative persons among children aged 1–2 years who had not been ill before was 25% (2019 - 80%, 2018 - 41.7%), which indicates the accumulation of a sufficient number of unprotected contingents and as a result of this, the prerequisites for an aggravation of the epidemiological situation.[4]

RESULTS

For the prevention of chickenpox, the population must be vaccinated. Apart from vaccination, there are no countermeasures to control the spread of chickenpox, as it proves the only way to reduce the incidence of chickenpox. Of course, people who have received vaccination can get chickenpox, but the disease will be much milder [5]. According to the data from the report "Information on infectious and parasitic diseases" for the period from 2019 to 2021, we can see that the percentage of vaccinated children is very small, which can lead to an aggravation of the epidemiological situation for chickenpox.

DISCUSSION

The materials presented in these reports and the data from the analysis of the implementation of specific prevention for 2021 confirm the fact that in Yekaterinburg, a large percentage of people have unvaccinated children. This fact indicates the need to inform parents about vaccination against chickenpox and its consequences.

CONCLUSIONS

A study of the literature and reports referenced in this paper, as well as an analysis of the results on chickenpox, led to the Conclusions that the incidence of chickenpox remains high, especially among groups of organized preschool age, unorganized in preschools, primarily young children from 0 to 2 years and organized children from 3 to 6 years [6]. The epidemiological disadvantage of the territory in terms of the incidence of chickenpox in recent years is a reflection of the insufficient effectiveness of the preventive and anti-epidemic measures being taken [7]. Vaccination should be purposeed primarily at young children.

The main preventive measure is specific prophylaxis. Therefore, it is necessary to convey to parents the importance of vaccinating against varicella. In order to avoid its consequences in the future, as well as to increase the level of the immune layer of the population.

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ЗАБОЛЕВАЕМОСТЬ РОДИЛЬНИЦ И НОВОРОЖДЕННЫХ ИНФЕКЦИЯМИ, СВЯЗАННЫМИ С ОКАЗАНИЕМ МЕДИЦИНСКОЙ ПОМОЩИ, В АКУШЕРСКИХ СТАЦИОНАРАХ Г. ЕКАТЕРИНБУРГА

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