ETIOLOGY, EPIDEMIOLOGY, PREVENTION AND MEASURES AGAINST THE EPIDEMIC OF RUBELLA DISEASE IN CHILDREN

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Abstract: Rubella is an acute anthroponosis viral infection characterized by fever, maculopapular rash, and diffuse lymphadenopathy. This article provides a general description of rubella, its etiology, epidemiology, diagnosis, and treatment, as well as methods for improving prevention and control measures.. The article analyzes the main trends in reducing the spread of infectious diseases based on world experience and modern approaches.

Keywords: rubella, incubation period, infectious diseases, etiology, epidemiology, prevention, anti-epidemic measures.

Content of the article.

Introduction: Rubella is an acute anthroponous viral infection characterized by fever, a maculopapular rash, and diffuse lymphadenopathy. Rubella is characterized by the following clinical features:

- Small spotted papular rash on the legs, arms, flexors, shoulders, buttock area;
- Slight increase in body temperature;
- Absence of intoxication;
- Lymphadenopathy, enlargement of the lymph nodes behind the ear and under the ear;
- Rarely – arthralgia

Rubella was first described in 1740 by the German therapist F. Hoffman. In 1881, the disease was recognized as a separate nosological form. In 1938, Japanese researchers proved the viral nature of the infection. The causative agent of rubella was isolated in 1961 by several scientists simultaneously: P.D. Parkman, T.H. Weller, F.A. New.

Etiology: Rubella virus is an RNA virus of the Togaviridae family, genus Rubivirus. It is unstable to the external environment and is rapidly destroyed by changes in pH, drying, exposure to ultraviolet light, and physical and chemical factors.

The mechanism of development of the epidemic process

Rubella is an anthroponotic disease, the source of the pathogen is patients and infants born with congenital rubella. The latent period of rubella lasts from 11 to 22 days. The virus penetrates the mucous membrane of the upper respiratory tract and reaches the lymph nodes (dorsal and occipital lymph nodes), causing inflammation and enlargement of the lymph nodes.

Initially, the rash appears on the face, neck, behind the ears, and scalp. Over the course of a day, the rash spreads to the entire body. The rash is most common on the

back, buttocks, and the flexors of the arms and legs, but not the palms of the hands or feet.

After the rash appears, it will gradually disappear. It disappears completely within 1-3 days and leaves no stain after itself. In 30% of cases, rubella passes without a rash, but lymphadenitis is always observed. The patient is at epidemic risk in the 2nd half of the latent period. High infectivity corresponds to the prodromal period and the first days of the disease.

The disease is transmitted by airborne droplets and spreads rapidly among children, especially in crowded settlements. The infectiousness of rubella is lower than that of measles and chickenpox.

In the children's department of the hospital, children who are in the same ward or room with the patient are mainly infected.

Vertical transmission of the disease from mother to child is of great importance.

When pregnant women contract rubella, the viruses enter the placenta and multiply, damaging the placental barrier and infecting the fetus. As a result of the virus destroying the placenta's blood vessels, the fetus's nutrition is disrupted. This leads to slow fetal growth, disruption of the normal formation of internal organs, and the development of various defects.

Congenital rubella can affect various organs, but the most common three symptoms are cataracts, deafness, and congenital heart defects.

There is a high natural susceptibility to rubella infection, and only infants under the age of one year are not affected by this disease. Children aged 1-2 and 3-6 years are susceptible to the disease, and schoolchildren and pregnant women are also susceptible to the disease. After rubella, permanent and stable immunity remains, but if people with immunity do not encounter this infection again for 10-20 years, the immunity weakens.

Epidemiological surveillance is carried out by the State Sanitary and Epidemiological Service. Pregnant women and infants in rubella outbreaks are placed under medical observation and serological tests are performed to prevent births with congenital rubella.

Blood sampling from pregnant women is carried out simultaneously with blood sampling from the first patient in the outbreak. The decision to terminate the pregnancy is considered only after serological confirmation of the diagnosis. If the pregnant woman does not have clinical signs of rubella, the procedure is carried out according to the results of serological tests

Preventive and epidemic control measures

Isolating patients from a children's institution is not effective enough for the presence of an asymptomatic form of the disease. By the end of the latent period, the release of the pathogen is observed, and the patient is considered dangerous. Children are vaccinated at 12 months, revaccination at 6 years.

Emergency prophylaxis with immunoglobulin has been shown to be ineffective.

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