



THE COURSE OF MEASLES IN YOUNG CHILDREN

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Relevance

Measles is an acute, highly contagious viral disease that can occur at any age. The most severe cases have traditionally been observed in young and adolescent children. Complications typically include pneumonia, severe keratitis, and the coexistence of other infectious diseases such as diphtheria, chickenpox, and others. Currently, measles primarily affects the following vulnerable groups: unvaccinated infants and newborns without passive maternal immunity to the measles virus, as well as children in the latter half of their first year of life, who are at high risk for developing severe complications.

Measles is a disease that has affected humanity since ancient times and is considered nearly universally susceptible. Historical records show repeated epidemics with high mortality, especially among children. It has been one of the most widespread childhood infections globally and was previously referred to as the “plague of childhood.” The disease is believed to have been brought to Europe in the 6th century during the Saracen invasion, along with smallpox. The first clinical descriptions of measles are attributed to the 9th-century Arab physician Rhazes, who regarded it as a milder form of smallpox. In the 15th century, the term "morbilli" was used to refer to measles. The disease was often confused with other exanthematous infections such as scarlet fever and smallpox.

During the Middle Ages, measles spread from Europe to the Americas, becoming one of the most prevalent infectious diseases worldwide. In the late 17th century, physicians such as T. Sydenham in England and R. Morton in France described the clinical features distinguishing measles from scarlet fever and smallpox.

Major epidemics were recorded in Germany (1823–1824), Europe (1834–1836), and North America (1846–1847). In 1846, P. Panum conducted the first epidemiological study of a severe measles outbreak in the Faroe Islands, where 6,000 out of 7,782 inhabitants became infected. Not only children but also elderly people contracted the disease. In the 19th century, researchers like Trousseau, Barthez, and Grancher contributed significantly to clarifying the clinical manifestations and transmission routes of measles. In 1895, N. F. Filatov described a characteristic early sign of measles—whitish spots on the buccal mucosa, opposite the second molars. At the same time, American pediatrician N. Koplik and Russian physician A. P. Belsky identified this pathognomonic sign, which later became known as the Filatov-Belsky-Koplik spots.

Purpose of the Study

To investigate the clinical course of measles in young children.

Materials and Methods

The study included 40 children aged 5 months to 3 years hospitalized with measles at a pediatric infectious diseases hospital. Among them, 13 children (30.6%) were classified as infants. Diagnosis was based on epidemiological data, medical history, and a thorough evaluation of clinical signs throughout the disease course. Special attention was given to identifying pathognomonic signs such as Filatov-Belsky-Koplik spots and the staging of rash and pigmentation.

Serological confirmation was performed by detecting specific IgM antibodies in the blood. Laboratory investigations included complete blood count, urinalysis, and, when indicated, biochemical blood tests (ALT, AST, total and direct bilirubin, total protein and fractions, creatinine). All patients received symptomatic therapy along with proper diet, care, and bed rest.

Results and Discussion

The sources of infection were identified in all cases. Most children (32 cases, 88.9%) were admitted to specialized infectious disease wards within the first week of illness. Of these, 7 children (19.5%) were admitted during the catarrhal stage (days 1–3), 25 (69.4%) on days 4–6, and 6 (11.1%) on days 7–12. A typical moderate form of



measles was diagnosed in 38 children (94.4%). Two children (5.6%) who had received normal human immunoglobulin during the incubation period were diagnosed with atypical measles.

In 36 cases, the disease followed a classic cyclic course, including incubation, prodromal (catarrhal), peak (rash), and recovery (pigmentation) stages. Fever was observed in 22 patients (64.7%) with temperatures ranging from 38.6°C to 39.2°C, and in 14 children (35.3%) temperatures ranged from 38.0°C to 38.5°C. The intoxication syndrome was characterized by decreased appetite (78.2%), weakness (76.4%), sleep disturbances (75.3%), irritability and headache (70.3%), lethargy, and tearing (92%).

Catarrhal symptoms were present in all patients (100%), manifesting as dry cough, nasal congestion, moderate mucous nasal discharge, and mild conjunctivitis.

Conclusion

In children aged 5 months to 3 years, measles most commonly occurred in the typical moderate form (94.4%). Pathognomonic features included Filatov-Belsky-Koplik spots (67.7%), staged rash (100%), and staged pigmentation (100%).

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