ANTI-EPIDEMIC MEASURES IN A MEASLES OUTBREAK FOCUS AND THE ROLE OF HEALTH EDUCATION AMONG THE POPULATION

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Abstract. *This thesis analyses the epidemiological chain of measles – the source of infection, the mechanism of transmission and the susceptible population – and describes preventive measures targeting each link. The importance of early detection and isolation of patients in an outbreak focus, monitoring of contacts, urgent vaccination and immunoglobulin prophylaxis, as well as the organization of health education among the population within the work of family polyclinics, is substantiated.*

Keywords: *measles, outbreak focus, isolation, post-exposure prophylaxis, immunoglobulin, health education, primary health care.*

Introduction

Measles is a viral infection that spreads very easily by the airborne route. The virus is released into the air when a patient coughs, sneezes or talks, and in an enclosed room it remains infectious for up to two hours after the patient has left [5]. A patient is most dangerous to others from 4 days before to 4 days after the onset of the rash. The incubation period lasts on average 10–14 days (ranging from 7 to 21 days) [3; 5]. For this reason, a single undetected case can quickly lead to clusters of infection within a family, school, kindergarten or hospital.

Although routine vaccination is the main way to prevent measles, prompt anti-epidemic measures taken for every reported case are crucial for stopping the spread of infection. These measures target the three links of the epidemic process – the source of infection, the routes of transmission and the susceptible host [1; 9].

Main part

Measures targeting the source of infection. The only source of measles infection is an infected person. Early detection is therefore essential: every patient with fever, cough, coryza, conjunctivitis and a maculopapular rash is considered a suspected measles case, and samples are taken for laboratory confirmation (detection of measles-specific IgM antibodies in serum or PCR). The patient is isolated at home or in an

infectious diseases hospital for at least 4 days after the rash appears. Each case is urgently reported to the sanitary and epidemiological service in accordance with the established procedure [6].

Measures to interrupt transmission. Since the measles virus is unstable in the environment, terminal disinfection is not carried out in the focus; however, regular ventilation of rooms and wet cleaning are recommended. In health facilities, preventing suspected measles patients from waiting in the general queue, placing them in a separate room and monitoring the immune status of health workers help prevent hospital-acquired infection [5].

Measures targeting the susceptible population. All persons who have been in contact with the patient in the focus are registered and their vaccination status is determined. Persons who are unvaccinated, incompletely vaccinated or have never had measles receive measles vaccine within 72 hours after contact. For persons in whom the vaccine is contraindicated – infants under 6 months, pregnant women and immunocompromised patients – administration of normal human immunoglobulin within 6 days after contact is recommended [5]. Contacts remain under medical observation for 21 days from the last day of contact; for those who received immunoglobulin this period is extended. In accordance with WHO recommendations, giving vitamin A to children with measles reduces the risk of complications and death [1; 3].

The role of health education. The effectiveness of anti-epidemic measures depends largely on public awareness. If parents do not recognize the early signs of measles, they may keep sending the child to kindergarten or school, or take the sick child straight to a crowded polyclinic, which further spreads the infection. It is therefore advisable for primary health care facilities to work in the following areas: explaining the need to call a doctor to the home when symptoms appear; providing evidence-based information about the benefits and safety of vaccination; holding talks and round-table discussions in cooperation with community (mahalla) leaders and school and kindergarten staff; and disseminating accurate information through the mass media and social networks while responding promptly to misinformation [8].

Studies show that a health worker's recommendation is one of the strongest factors influencing a parent's decision to vaccinate their child [8]. Therefore, training family doctors and nurses in effective communication with the public, and working individually with families who refuse vaccination, should be an essential part of health education activities.

Conclusion

Timely and comprehensive measures in a measles focus – early detection and isolation of the patient, monitoring of contacts, urgent vaccination within 72 hours and, where indicated, administration of immunoglobulin – limit the further spread of the disease. Continuous health education combined with routine vaccination increases public vigilance and makes sustained control of measles possible.

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