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Measles

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Introduction

Measles is one of the highly contagious, serious disease caused by rubeola virus. Before the vaccine for measles it has caused almost 2.3 million deaths each year, mostly children under age of 5 years. Measles is a human disease and there is no evidence that it ever occurred in animals [1]. Measles virus is spread mostly by droplet route like coughing, sneezing, close personal contact with the infected individual. Virus has the capability to remain active for at least 2 hours in the air or on infected surfaces. Infected individual can lead to some serious complications: pneumonia, seizures, laryngotracheobronchitis, otitis media [2]. It is essential that proper diagnosis and vaccination is important to prevent the onset of disease and to avoid any complications. Therefore, a live attenuated vaccine is available to prevent the onset of disease [3].

Epidemiology

Measles is still serious health problem in developing countries, and an estimated death are 74% in 2000 to 2010. The WHO Global action plan for 2020 has a target to eliminate measles in at least five regions by 2020. Elimination is defined as "the absence of endemic measles transmission in a defined geographical area" [4]. However, in the pre-vaccine era, the season for outbreak is usually late winter and early spring while in tropical climatic condition outbreaks occurred in the dry season [5]. Before vaccination measles is a disease of young children and improved vaccination coverage has reduced the likelihood of childhood exposure at earlier stages. Estimated global burden of measles has so far exceeded 9.7 million cases in 2015. The measles strategic planning (MSP) developed by WHO provides an excellent tool to analyze immunization and surveillance data [6].

Clinical Manifestations

Measles is a viral disease that can spread rapidly, and it can be an endemic condition. The symptoms of measles always have fever accompanied with at least one of the Cs: Cough, coryza, conjunctivitis, and symptoms usually appear after 12 days. The infection occurs through air borne particle and the initial sign of infection is high grade fever, which begins in 10 to 12 days after exposure to virus and lasts up to 7 days. Fever is accompanied by runny nose, red and watery eyes, and small white spots inside the cheeks. After few days' rash starts to erupt and most commonly on the face and neck area, and then in about 3 days it starts to spread reaching to hands and feet. On average rash occur 14 days after exposure to the virus. However, complication from measles are common and some are life threatening and those individuals who have weak immune system are at the greater risk also older people are more likely to complication than healthy children over the age of five years, and those patients with weak immune system are more susceptible to bacterial pneumonia. Measles in pregnancy can lead to miscarriage, low birth weight of infant. When virus enters the body, it multiplies in the back of throat, lungs and lymphatic system [7] (Figure 1).

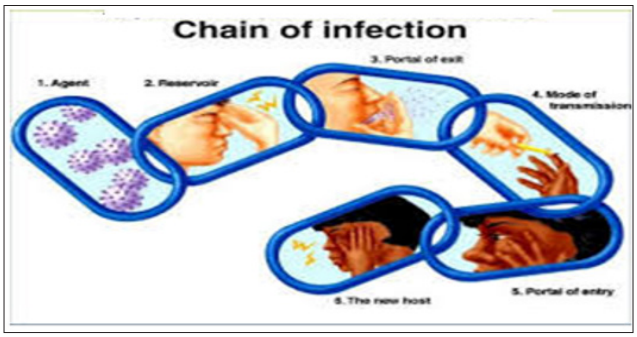

Figure 1: Chain of infection of Measles.

Diagnosis & Prevention

A pediatrician usually diagnoses by looking at the signs and symptoms and blood test confirms the presence of virus in blood. WHO recommends reporting any noticeable case of measles to their local authorities, so data can be kept up to date for a demographic region, and if patient is child doctor will also notify the school. Those individuals who already had measles are immune, WHO recommends Measles, mumps and rubella (MMR) vaccine to be

administered at the age of 12 to 15 months followed by a booster shot before going to school at the age of 4 to 6 years. According to WHO measles vaccination programs led to 79% drop in measles deaths globally [1].

Conclusion

The dynamics of transmission of virus and its distinctive clinical picture makes its diagnosis and prevention quite challengeable. However, preventive measures are very important to avoid the onset if disease and its complications, proper and in time vaccination is one of the key parameters to prevent the infection. Complications from measles can be avoided through supportive care by providing adequate fluid intake, and keeping the patient hydrated and children diagnosed with measles should be given two doses of vitamin A supplement to prevent eye damage and blindness. However, elimination of measles provides an opportunity to strengthen health system and better delivery of vaccine. The optimal implementation all those preventive measures and proper delivery of vaccine can eliminate measles and preserves the lives of millions throughout the world.

References

1. (2013) WHO Measles. World Health Organization.
2. Perry RT, Halsey N (2004) The clinical significance of measles: a review. J Infect Dis 189(Suppl 1): S4-16.
3. (2017) WHO Measles vaccines: WHO position paper Wkly Epidemiol Rec 92(17): 205-227.
4. Singh BK, Li N, Mark AC, Mateo M, Cattaneo R, et al. (2016) Cell-to-cell contact and nectin-4 govern spread of measles virus from primary human myeloid cells to primary human airway epithelial cells. J Viral 90: 6808-6817.
5. Rota PA, Moss WJ, Takeda M, De Swart RL, Thompson KM, et al. (2016) Measles. Nat Rev Dis Primers.
6. Patel MK, Gacic Dobo M, Strebel PM, Dabbagh A, Mulders MN, et al. (2016) Progress toward regional measles elimination Worldwide, 2000-2015. Morb. Mortal Wkly Rep 65(44): 1228-1233.

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