

## Measles: A vaccine preventable disease

Measles is known as one of the most infectious and persistent human viral diseases. It is caused by measles virus. Measles virus is a member of the genus Morbilli virus in the family paramyxovirus, which is a linear single strand RNA and has only one Sero-type.<sup>1</sup> Its distribution is worldwide and causes disease only in humans, in any climate and under any condition provided that enough susceptible individuals are brought together to enable its spread.<sup>2</sup>

The principal mode of transmission is via droplet infection. Indirect contact and transmission by fomites may also occur. Measles is characterized by fever and catarrhal symptoms of the upper respiratory tract, followed by a typical rash. The period of communicability is approximately 4 days before and 4 days after the appearance of the rash. Isolation of the patient for a week from the onset of rash and covering the period of communicability can limit spread of measles. One of the most common complications of measles, especially among children is upper respiratory tract infection. Pneumonia is also a common complication in children and carries high fatality. Timely vaccination is the most important step to prevent this disease. Treatment strategy is symptomatic management, in case of primary infection by giving antipyretic to patients, complete bed rest and isolation before and after the appearance of rashes but in case of secondary bacterial infection (pneumonia) antibiotics should be given to the patient.<sup>3</sup>

Worldwide 2.6 million deaths occurred due to measles in 1980. In the populous areas of the world, measles causes epidemics every two to five years. Meanwhile, in the large villages and semi urban populations in the developing countries, world epidemics occur every two to three year.<sup>4</sup> The primary strategy developed to control the measles and mortality burden in developing countries like Pakistan, is based on mass immunization campaign that target older infants and children with current vaccine.<sup>(5)</sup> As an outcome of control strategy, the annual number of deaths decreased from 733000 in 2000 to 164000 globally in 2008. (2) The expanded programme on immunization (EPI) began in Pakistan in 1976 on a pilot scale and was expanded country wide by 1978. Initially it was started with 6 antigens namely tuberculosis, diphtheria, pertussis, measles, polio and tetanus for children and their mothers against tetanus. The programme added 2 new antigen, hepatitis B and haemophilus influenzae type-b (Hib) during the last decade. A single dose of measles vaccine was being used in Pakistan's National EPI program at 9 months of age until 2007, now two dose strategies have been evolved with 2<sup>nd</sup> dose at 15 months, 0.5ml measles vaccine, subcutaneously mainly at medial aspect of thigh.<sup>4</sup> Measles epidemic occur every two to three years because percentage of susceptible increases due to low coverage, mainly caused by poor implementation of immunization program and low efficacy due to inherent technical issues with vaccine. Political will of government, increased involvement of political and social leader may improve the situation regarding measles in Pakistan.

## REFERENCES

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