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In many infections some patients recover while others die or are permanently disabled. These extremes in clinical outcome may be determined by the capacity to eliminate the infecting agent and the antigenic load on the individual. Suppressed immune reactions in malnutrition may be responsible for relative severity of infection while in apparently healthy persons, it is not clear to what extent immune responses influence the outcome.

Measles is one of the commonest infectious disease prevalent all over the world. Extensive surveys conducted in Africa, Australia, USSR & Latin America suggest that measles is not a mild affliction especially among socio-economically depressed communities, often steeped in religious prejudices. Measles is a more severe disease in the developing countries than in developed countries.

Measles, an easily preventable infection, kills several hundred thousand infants and small children yearly in developing countries. About 16 million children suffer from measles each year in India. The mortality rate has been calculated as being one every 2.5 minutes or 200,000 every year. Case fatality ranges from 3 to 6 percent in rural areas. The high case mortality in our country is
most probably related to the high prevalence of measles in very young age.

The severity of measles can be judged by a proverb famous about measles in West Asia (Morley, 1969). "A child that gets out of measles, is a child that is reborn".

Measles per se is a benign self limiting infection. It is the complications of measles which make it one of the most dreaded disease. Its complications ranked first on the list among mortality due to measles, diphtheria, pertussis and polio. Bronchopulmonary, gastro-intestinal and neurological complications are the most commonly encountered complications during measles, although some other complications such as stomatitis, protein loosing enteropathies, otitis media etc. are also seen. Broncho-pneumonia and diarrhoea are the most common causes of death from measles (Ghosh & Dutt, 1961).

Ramalingaswami (1969) stated "Nutrition is an essential part of the mosaic of factors that determines the natural history and biological gradient of diseases especially in developing world". In no other area is this statement more dramatically illustrated than in the interaction of measles infection and malnutrition. Measles is more severe in malnourished children and these children are likely to get complications more commonly than their well nourished peers. Eighty five to 96% of complications are associated with malnutrition while 4 - 20% healthy
children have complications. Mortality rates are also reported to be very high in these children.

Measles is probably the most common cause of secondary immune deficiency syndrome along with rubella. Suppressed tuberculin reaction after measles in previously positive individuals was reported very early in 1908 by Von Pirquet. The cell mediated immunity is generally regarded as the essential factor in recovery from measles infection. The effect on the cell mediated immunity has been widely studied and has been shown to last for 6 weeks to as long as one year.

In other viral infections humoral immunity (HI) has been considered a critical factor when antibody titres were correlated with the outcome or when serum therapy proved protective. However, in measles, until recently humoral immunity (HI) and its antibodies has been described as "side effects epiphenomena of minimal or no importance".

Humoral Immunity (HI) in measles has not been studied adequately so far. Absolute lymphopenia which affects all T, B & null cells has been shown to occur in acute measles and is related to the outcome. Immunosupression which occurs during measles affects chiefly T & B cells sub-population functions with less severe effects on T cells functions. Measles virus causes the suppression of antibody and immunoglobulin synthesis. There was defective antibody production in children who did badly after measles infection (Coovadia et al, 1978).
If the antibodies response is depressed in severe cases, support of HI with immunoglobulin may have therapeutic value. If this is true, HI should be considered a critical factor. In other viral diseases e.g., enterovirus, arthropod born virus and measles related canine distemper virus, HI has been judged a critical factor due to:

(a) A correlation between outcome and antibody response, and/or

(b) A therapeutic value of immunoglobulin during the course of measles. With this perspective in mind, this study was planned with following aims.

1. To study the levels of immunoglobulins IgG, IgA & IgM in cases of measles with or without any complications.

2. To evaluate the variation in immunoglobulins with different types of complications.

3. To evaluate the relationship of malnutrition, incidence of complications, type of complication and outcome of disease process with the immunoglobulin levels.

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