INTRODUCTION
Measles is a highly infectious disease of varying severity occurring in human beings. It is one of the most common infectious disease of early childhood, endemic in many areas of the world, with recurrent epidemics, showing a characteristic epidemiological pattern based on the ratio of immune and susceptibles in the population.

It is well known that extensive immunosuppression exists during acute measles (Coovadia et al., 1973). However controversies still exists regarding the mechanism of immunosuppression especially in young children. Possible hypothesis have been advanced in support of immunosuppression, Whittle, H.C. and Dossator, J. (1978) have suggested that the depletion of T cells, an inhibitor of lymphocyte proliferation in the serum and a possible defect in antigen processing interacts to depress cell mediated immunity in measles.

The study of Whittle H.C. and Bradley Moore (1973) have shown that measles causes a temporary suppression of the skin reaction to PPD, Candida and Streptococcal antigens. However, when the expression of delayed hypersensitivity was suppressed, the patient could still be sensitized normally to Dinitrochlorobenzene (DNCB) and their lymphocyte responded to stimulation with PHA.
It is now well established that cell mediated immunity is important not only for recovery from measles, but also for resistance to other bacterial and viral infections. A deficit in cellular immunity can favour the emergence of complications in measles. Tuberculosis and moniliasis infections normally controlled by cell mediated immune responses, are known to follow measles (Rech 1962, Smythe et al., 1971). Pyogenic infections, which are usually limited by humoral immune responses, are also frequent and severe in children with measles. Mortality due to measles shows two distinct phases. The children may develop complications in the acute stage of measles or during the subsequent period. Prolonged morbidity due to secondary infection is frequent especially in malnourished children, this has been attributed to immunosuppression. Many speculate that this phenomenon is due, at least in part, to the impairment in cellular immunity observed in malnourished children, especially during measles. Schiepafele and Forbes (1973) have postulated that measles is severe in malnourished children owing to defect in the formation of activated lymphocytes. In support of this argument children with oedema and malnutrition have been shown to be immunosuppressed. They have lymphopenia
(Trueth et al., 1971), a deficiency of T cells (Schopfer and Douglas, 1976) and fail to react to many common antigens. However Whittle has demonstrated that in malnourished children, although peripheral blood mononuclear cells (PBMC) support a higher replication of measles virus, their cellular immunity does not seem to differ from that in well nourished children (Desai J. et al., 1977).

Studies by Bhaskaran K. et al. (1984) have indicated that there is an equal degree of immunosuppression in both malnourished as well as well nourished children. However their subsequent studies (1986) have revealed a significant depression in circulating T lymphocytes, in severely malnourished children compared to those of other nutritional grades. Ron Dagon et al. (1987) have shown that there was a more impressive depression in T cell count than the B cell in malnourished children with acute measles, both T and B cell counts have been shown to be increased in convalescent phase of the illness.

Immunological studies in measles indicate that the profound immunosuppression during the first few days of the rash has been shown to affect chiefly T and B cell subpopulations, with less severe effects on C3 and T cell function assessed by FHA transformation of lymphocytes (Cowdenia et al., 1978). Elements of immunosuppression
persists up to 3 weeks and then there is return towards the normal at 6th week in uncomplicated cases. Both T and B cells have been shown to be infected in disease process and they also support replication of virus (Fellon Winsome et al., 1982). Per Arneborn and Gunnar Hiberfled (1984) noticed T lymphocytopenia but no change in the ratio between T lymphocytes of helper and suppressor/cytotoxic cell phenotypes.

Controversies, however still exists regarding the B cell count which have been shown to be depressed (Coovadia et al., 1978). While others have noticed no significant change in the B cell subpopulation (Whittle H.C., Dossetor 1978 and Ron Dagon et al., 1987).

There are many studies highlighting T cell and B cell function. But no other work have been performed to our knowledge comprising T and B cell function in malnourished children and nourished children suffering from measles along with skin reaction to Dinitrochlorobenzene (DNCB). In the light of above observations the present study was undertaken to evaluate the immunological responses in cases of measles during the first week of illness.
AIMS AND OBJECTIVES:

1. To assess the immunological status in patients of measles by T cell count, B cell count and skin reactivity by DNCB test.

2. To evaluate the co-relation between lymphocyte and DNCB skin test.

3. To compare the cell mediated immunity in malnourished and well nourished children suffering from measles.

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