

## **INTRODUCTION**

Protein caloric malnutrition is a worldwide problem from which as many as two thirds of the preschool children in developing countries suffer Osuntokun, (1976). It is a clinical disease resulting from inadequate supply of proteins, amino acids and calories El-Behairy, et al., (1977). It is common in tropical and subtropical areas with age incidence between 6 months and 3 years Jelliffe and Stanfield, (1978).

Protein caloric malnutrition PCM is classified into marasmus, Kwashiorkor and marasmickwashiorkor. There is a synergistic relationship between PCM and infection Scrimshaw, et al., (1968) as they predispose to and enhance each other Chandra, (1979).

PCM infants are considered immunocompromised patients as humoral, cellular and phagocytic functions are inhibited in them Suskind, (1980).

A definite effect of PCM on humoral immunity has not been generally observed. The majority of PCM children have circulating IgA, M and G levels which are either normal or elevated Suskind, (1980). Antibody response varies according to the type and form of antigen presented Chandra and Newberne, (1977). Individuals with

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PCM also have impaired killing by PMNs neutrophils and macrophages.