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Never before in the history, the human race has faced a situation as it does today. It now stands at a point where millions in the developing countries suffer from perpetual hunger. Many die every day directly or indirectly from malnutrition. Children are the worst victims; and kwashiorkor and marasmus are the pitiable symbols of this immense human misery.

In India, according to the latest 1981 census preschool children up to 5 years constitute about 116 million population. About 19 million children are added to the pool every year. Out of 23 million children born every year, 4 million die in childhood, 3 million become healthy and productive citizens but rest 16 million become adults with poor mental and physical abilities due to serious undernutrition in their childhood.

The term protein calorie malnutrition comprises a variety of very closely interrelated clinical syndromes, which are the result of differences in the severity and duration of the deficiencies, and the age
of the child and the relative importance of the protein deficiency in regard to that of calories.

In our country, the incidence of severe form of Protein Calorie Malnutrition like kwashiorkor and marasmus is about 1-2 %, whereas the mild and moderate forms account for 60-80 % of total preschool population.

It is generally accepted that malnutrition is the result of protein and/or calorie deficiency. There is no doubt that the diets of those children in whom malnutrition develops are also frequently low in fat content. Further the well documented observation that the fatty infiltration of the liver and good layer of subcutaneous fat are characteristic signs of one of the severe form of malnutrition i.e. kwashiorkor, indicate a defect in fat metabolism.

There have been an increasing volume of investigations into the metabolic dysfunction occurring in protein calorie malnutrition in infants, young children and in experimental animals. In particular research into protein metabolism, carbohydrate metabolism, enzyme activities, body composition (including water and electrolytes) and lipid metabolism have not only increased the fundamental knowledge, but has already been of practical value
in indicating improved methods of treatment. Also, the researches have suggested possible approaches for measuring the severity or degree of protein malnutrition quantitatively and specially of diagnosing less severe degrees of deficiency biochemically.

Some workers have reported differences in kwashiorkor and marasmus group in total lipid levels and lipid fractions. In untreated kwashiorkor the total lipids and other fractions are low with increased free fatty acid levels in serum, whereas in marasmus, the serum lipids remain within normal limits.

The majority of lipid investigations have been carried out in kwashiorkor group, while studies on lipid metabolism in marasmus and other malnutrition groups are very few. In the present study, though a humble one, the characteristics of serum total lipids and its fractions (total cholesterol and free fatty acids) in the severe and recovery phases of undernutrition, marasmus, marasmic kwashiorkor and kwashiorkor have been investigated.

It was aimed to evaluate the lipid profile in infants and children with varying degrees of malnutrition to assess the status of total lipids and
its fractions (total cholesterol and free fatty acids) in relation to severity of malnutrition and to further evaluate the possible interrelationship between the clinical progress of the malnourished child and subsequent changes in the lipid profile by serially following the cases.