Serum Transthyretin Level as a Plausible Marker for Diagnosis of Child Acute Malnutrition

Abstract
Malnutrition is a major underlying condition for mortality in children under five years of age in developing countries, particularly in Ethiopia. The most important forms of malnutrition in Ethiopia are protein and energy deficiencies. There is no reliable laboratory method at present to assess acute malnutrition. Transthyretin is a homotetrameric serum protein with half-life of two days. The main objective of this study was to assess the estimation of serum transthyretin level as a useful diagnostic method to evaluate nutritional status of children. We used a newly designed transthyretin test kit to evaluate nutritional status of children admitted to our hospital. There is no national reference standard; hence we made a comparative study using anthropometric measurements and measurement of serum albumin level. A total of 102 children (51 controls and 51 study subjects) were included in this study. Transthyretin was found to be more sensitive to changes in acute malnutrition than albumin, and its level reflects recent dietary intake compared to overall nutritional status. The method is more sensitive and reliable for detection of acute malnutrition, along with anthropometric methods. Measurement of serum transthyretin level can be used as a valuable diagnostic method for assessment of acute malnutrition among children.

Publications
Antidiabetic and gastric emptying inhibitory effect of herbal leaf extract in rodent models of diabetes type 2 mellitus.
Oxidative Stress Correlates with Complications Among Diabetic Patients Attending a Diabetic Clinic in Muhimbili National Hospital, Dar es Salaam, Tanzania.
Alterations in antioxidant enzymes and oxidative damage in experimental diabetic rat tissues: effect of vanadate and fenugreek (Trigonella foenum graecum).

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