

# Towards the malnutrition crisis, antioxidant status and nitric oxide are important for kwashiorkor.

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## Introduction

Clinical and anthropometric data were collected and compared with industry norms. The following were the principal reasons for the kwashiorkor group: 60 to 80 percent of normal body weight standards, widespread edoema, skin lesions, and hair loss and/or discoloration. Although hypalbuminaemia and hypoglutathionemia are common in kwashiorkor, they were included to our study protocol. Infections were treated with in kwashiorkor patients, and those who had a high Hb concentration and needed a blood transfusion have been eliminated from a study [1]. Every 20 days, patients were followed up clinically and biochemically. The tight inclusion criteria not only improve the data's reliability and validity, and they also explain why this particular group of patients has such a high mortality rate. Kwashiorkor, a severe edematous symptom of malnutrition, has a complicated aetiology. Moreover, abnormalities in redox metabolism have been linked to the condition. The factors in albumin and glutathione levels were linked to prognosis for over start of the study. The goal of prophylactic and therapeutic methods should be to carefully address the clients' low antioxidant status. Acute malnutrition is among the world's most pressing based on socioeconomic issues. Nutrient malnutrition is classified clinically into three distinct marasmus, each of which is characterised by a substantial lack of body mass [2].

## Bilirubin and uric acid

Bilirubin is already found to prevent the oxidation of aromatic amino acid residues, the production of peptide carbonyl groups, and protein fragmentation by scavenging peroxy radicals and peroxynitrite. Metabolism, which ranks third among plasma antioxidants, can operate as a scavenger of singlet oxygen and radicals. It has been demonstrated that the creation of a complex between uric acid and iron ions inhibits ascorbate oxidation and lipid peroxidation. In kwashiorkor, both bilirubin and uric acid were determined to be within normal ranges, with no big variation between patients and controls. Kwashiorkor is due to a combination of changed parameters, including lower antioxidant levels and, above notably, albumin insufficiency [3].

## Glutathione

In kwashiorkor patients, erythrocyte glutathione concentrations were significantly lower, and this was obviously linked to the clinical result. Besides glutathione's numerous roles in physiological redox balance, many of which are addressed

below, its positive effects on cell membrane electrolyte transport may play a central role in the pathogenesis of kwashiorkor [4].

## Nitrite and nitrate

NO concentrations in plasma were measured with minor changes according to Grisham. This method relies on spectrophotometric measurements of NO's stable metabolic products, nitrite and nitrate, to determine NO indirectly [5]. On the basis of a calibration curve with KNO<sub>3</sub> samples, plasma NO concentration were estimated.

## Conclusion

Therapeutic and prophylactic treatments in kwashiorkor must aim to treat infection, maintaining hydration, and meticulously addressing the diminished antioxidant capacity and, in turn, the protein shortfall. A notion of kwashiorkor patients have severe liver failure and hence react very sensitively to the injection of proteins and other antioxidant chemicals poses a significant difficulty in establishing an effective therapy that can break the underlying viscous circle.

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