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CORRESPONDENCE

Nutritional deficit in miliary tuberculosis: prognostic value

To the Editors:

KIM *et al.* [1] have previously shown the prognostic importance of nutritional deficit in the development of acute respiratory failure and further outcome in miliary tuberculosis (MTB). There are a few points that need to be discussed further so that its relevance is properly understood.

Under 4-point Nutritional Risk Score, KIM *et al.* [1] have used severe lymphocytopenia and hypocholesterolaemia as the parameters of poor nutritional status. MTB is characterised by compartmentalisation of lymphocytes at the site of inflammation (lymphocytic alveolitis), leading to their reduced number in peripheral blood [2]. Moreover, total lymphocyte count has not been found to be a suitable marker of malnutrition in the elderly [3]. In addition, keeping the varied presentations and leukocyte counts in MTB in mind, use of severe lymphocytopenia as a parameter does not seem justified.

The role of hypocholesterolaemia as a nutrition status parameter is an area of active research and has not been well proven. Low serum cholesterol levels are also caused by inflammatory mediators during active infection [4] and hence, may not truly depict nutritional deficit. Literature on the association between low serum cholesterol levels and tuberculosis outcome is also lacking.

Malnutrition is the most common cause of immunodeficiency. Nutrition status is a nonspecific parameter that critically determines the outcome of all infections and is not specific to MTB. Animal experiments have shown that malnutrition leads to decreased immunological response to infection, and particularly diminished lymphocyte stimulation and cytokine secretion, leading to poor outcome [5]. Other risk factors, such as presence of meningismus [6], hyponatraemia [7], elevated transaminase levels [8] and adrenal suppression, may specifically predict poor outcome in MTB.

Nutritional deficit has a complex interaction with infection. It not only increases susceptibility to infection but also determines its outcome. Infection may also precipitate nutritional deficiency as in tuberculosis. Initial presentation and severity of miliary tuberculosis may be a better predictor of disease outcome. However, nutritional deficiency can be a confounding factor, and hence should always be looked for and managed along with anti-tubercular therapy in all forms of tuberculosis.

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STATEMENT OF INTEREST

None declared.

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To the Editors:

We read with great interest the recently published informative article by KIM *et al.* [1] on the prognostic value of nutritional deficit in miliary tuberculosis (TB). Using a nutritional risk score comprising of four factors (low body mass index, hypoalbuminaemia, hypocholesterolaemia and severe lymphocytopenia), the authors demonstrated the independent and major prognostic values of nutritional status on both acute respiratory failure and 90-day mortality among 56 patients with miliary TB [1]. However, with the observational nature and retrospective design of the study, it might be difficult to pinpoint the exact cause and effect relationship between nutrition status and TB severity/outcome.