Abstract

Background & aims: Malnutrition is related with pulmonary disease. The aim was to analyze the association of lung function respectively to nutritional status, identified pulmonary pathogens and socioeconomic condition of patients attending a pediatric CF reference center. Methods: Cross-sectional study performed with CF patients aged 6 to 18 years attending a CF-Center in southern Brazil. Nutritional status, plasma albumin level and pulmonary bacterial colonization were assessed. The outcome studied was forced expiratory volume in 1 second (FEV1). Results: Eighty-five patients were included in this study. FEV1 was significantly associated with body mass index (BMI) percentiles, plasma albumin level and methicillin resistant Staphylococcus aureus (MRSA) pulmonary colonization. Regression analysis showed that BMI below the 10th percentile was associated with a 25.58% drop in FEV1, and plasma albumin levels equal to or lower than 4.1 mg/dL was associated with 18.6% FEV1 reduction. FEV1 was 14.4% lower in the MRSA infected patients. Plasma albumin of 4.25 mg/dL predicted FEV1 of 60% with 76.9% sensitivity and 72.2% specificity, and 85.7% accuracy. The socioeconomic status was not association with pulmonary function. Conclusion: BMI below the 10th percentile and albumin below 4.1 mg/dL were predictors of low FEV1. Chronic MRSA infection was associated with lower FEV1. Longitudinal studies may better complement these results.

Keywords

Cystic fibrosis, Nutritional status, Pulmonary function.