Original article

Clinical and economic outcomes associated with malnutrition in hospitalized patients

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SUMMARY

Background & aims: Hospitalized patients show a high rate of malnutrition, which is associated with poor patient outcomes and high healthcare costs. However, relatively few studies have investigated the association between clinical and economic outcomes and malnutrition in hospitalized patients, particularly those with cardiac and pulmonary conditions.
Methods: This multicenter prospective observational cohort study included 800 patients hospitalized at four Colombian hospitals with a diagnosis of congestive heart failure, acute myocardial infarction, community-acquired pneumonia, or chronic obstructive pulmonary disease. All patients were screened for malnutrition using the Malnutrition Screening Tool (MST). A descriptive analysis of baseline variables was followed by multivariate analysis and inverse probability weighting (IPW) to compare the clinical outcomes, i.e., length of stay (LOS), mortality, and readmission, and hospital costs associated with a positive MST result.
Results: The prevalence of a positive MST result was 24.62% (n = 197) and was more common in patients with older age and greater comorbidities. Multivariate analysis controlling for age, gender, healthcare plan, university degree, hospitalization, entrance disease and Charlson co-morbidity index showed that a positive MST result was associated with increased LOS (1.43 ± 0.61 days) and both in-hospital mortality (odds ratio, 2.39) and global mortality (odds ratio, 2.52). IPW analysis confirmed the association between a positive MST result and increased hospital LOS and 30-day mortality, as well as a relative increase of 30.13% in the average cost associated with hospitalization.
Conclusions: This study of hospital inpatients demonstrated a high burden of malnutrition at the time of hospital admission, which negatively impacted LOS and mortality and increased the costs of hospitalization. These findings underscore the need for improved diagnosis and treatment of hospital malnutrition to improve patient outcomes and reduce healthcare costs.

1. Introduction

There is a high burden of malnutrition in hospitals across Latin America, including those in Colombia. The results of prevalence studies performed since 2000 indicate that nearly 50% of hospitalized patients in Latin America are malnourished at admission, and more patients may be malnourished upon hospital discharge [1,2]. From 67 studies conducted across Latin America (n = 20,881), the prevalence of malnutrition varies greatly in the general hospitalized population, and studies from Colombia report a prevalence of more than 60% [3,4]. However, there is significant variability in the reported incidence of hospital malnutrition due to differences in patient populations, hospital admission rates, and the method or nutritional marker used for diagnosis. Older patients [5] and those with critical illness [6] show particularly high rates of malnutrition, and the percentage of patients discharged with malnutrition

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