Malnutrition Severity Predicts Clinical Outcomes in Hodgkin Lymphoma: Evidence From a Nationwide Cohort

Ahmad Basharat MD , Hafiz Muhammad Hannan Javed MD , Nouman Aziz MD , Afifa Aslam MD , Zainab Rauf MBBS , Alissa Marr MD , Moazzam Shahzad MD Marshfield Clinic Health System, Marshfield, WI, USA. Tidal Health Peninsula Regional Medical Center, Salisbury, MD, USA. Wyckoff Heights Medical Center, Brooklyn, NY, USA. King Edward Medical University, Lahore, Punjab, Pakistan. University of Nebraska Medical Center, Omaha, NE, USA. University of South Florida Morsani COM H. Lee Moffitt Cancer Center and Research Institute, Tampa, FL, USA

Introduction

Malnutrition is a recognized but under-addressed complication in patients with hematologic malignancies, including Hodgkin lymphoma (HL). This study evaluates the impact of malnutrition severity on clinical outcomes in hospitalized HL patients

Methods

We analyzed data from the National Inpatient Sample between 2016 and 2020, identifying adult patients with a primary diagnosis of HL. Malnutrition was classified into mild to-moderate, severe, and unspecified categories based on ICD-10 codes. Multivariate logistic regression models were used to assess associations between malnutrition severity and in hospital outcomes

Results

1. Among 49,582 hospitalized HL patients, 9347 (18.9%) had documented malnutrition: 2187 (4.4%) had mild-to-moderate malnutrition, 3972 (8.0%) had severe malnutrition, and 3188 (6.4%) had unspecified severity.
2. Adjusted in-hospital mortality was significantly higher in patients with malnutrition compared with those without ([adjusted odds ratio [aOR] 1.54 [95% CI, 1.29–1.83] for mild-moderate; aOR 2.76 [95% CI, 2.38–3.19] for severe; P<0.001).
3. Additionally, escalating malnutrition severity was associated with increased risk of septic shock, intensive care unit admission, mechanical ventilation, and transfusion requirements. HL patients with severe malnutrition also had higher odds of treatment complications, including febrile neutropenia (aOR 1.89) and chemotherapy delays (aOR 2.02).
4. Hospital length of stay and total charges were significantly higher in malnourished patients, reflecting greater healthcare resource requirements

Discussion

Malnutrition is prevalent among hospitalized HL patients and is independently associated with worse clinical outcomes and increased resource use. These findings highlight the urgent need for early nutritional screening and targeted interventions as part of comprehensive HL management strategies.