

Impact of prognostic nutritional index on outcomes in patients admitted to hospitalist team

세브란스병원 내과¹

박지수¹, 이한성¹, 신동호¹, 문성우¹, *문성우¹

Background/Aims: Onodera's prognostic nutritional index (PNI) is useful in predicting prognosis of various diseases. In hospitalized patients, malnutrition is an important factor that affects the quality of life and morbidity. Here, we aimed to evaluate whether PNI is related with clinical outcomes in patients who admitted to hospitalist team.

Methods: This study included 3,993 patients first admitted to the hospitalist team via ER and then discharged from the hospitalist team between March 2018 and November 2022. PNI score was calculated at the time of admission, and patients were divided into malnutrition and non-malnutrition groups according to a cut-off PNI score of 45. Multivariate logistic regression models were constructed to identify the risk factors for hospitalization longer than one month, in-hospital death, and unscheduled readmission within one month. Multivariate regression analysis was performed to identify the factors associated with the mean total cost per hospital stay.

Results: Among the 3,993 patients admitted to the hospitalist team, 2,469 (61.8%) of the patients were in the malnutrition group. In the multivariable logistic regression model, malnutrition at the time of admission was related with hospitalization longer than one month (OR: 2.810, 95% confidence interval [CI]: 1.933-4.086, $P < 0.001$) and in-hospital mortality (OR: 2.623, 95%CI: 1.715-4.013, $P < 0.001$), but was not related with unscheduled re-admission within one month (OR 1.092, 95%CI: 0.836-1.426, $P = 0.519$). Malnutrition ($\beta = 0.085$, $P < 0.001$) was the main determinants for total cost per hospital stay in the multivariate regression analysis.

Conclusions: Malnutrition, as defined by PNI, was very frequent among the patients admitted to the hospitalist team. And malnutrition was an independent predictor for hospitalization longer than one month, in-hospital mortality and higher total cost per hospital stay. These findings suggest that the PNI score, which can be easily calculated using serum albumin levels and lymphocyte counts, is a useful prognostic marker for patients admitted to hospitalist ward. It is important to stress the importance of nutritional assessment for patients.