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Validation of the 28-day mortality prognostic performance of the modified Nutrition Risk in Critically Ill (mNUTRIC) score in a Malaysian intensive care unit (Article) (Open Access)

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Abstract

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Introduction: The mNUTRIC score is a nutritional assessment tool to identify critically ill patients with high nutritional risk who could benefit from nutritional interventions. This study was conducted to validate the 28-day mortality prognostic performance of the mNUTRIC score in a Malaysian intensive care unit (ICU). **Methods:** This was a retrospective cohort study of adult patients who were consecutively admitted to the ICU from January 2017 to December 2018 for >24 hours. Data were collected on variables required to calculate the mNUTRIC score. Patients with mNUTRIC score ≥5 points were considered to be at high nutritional risk. Main outcome was 28-day mortality from all causes; ICU length of stay (LOS) and prolonged mechanical ventilation (MV) (>2 days) were secondary outcomes. **Results:** From a total of 432 admissions, 382 (88.4%) patients fulfilled the study criteria. Seventy-seven (20.2%) of these patients were at high nutritional risk. They had longer mean ICU LOS (7.1 ± 7.5 days versus 4.2 ± 4.0 days, $p=0.001$), greater proportion of prolonged MV (57.1% versus 14.4%, $p<0.001$) and higher 28-day mortality (44.2% versus 10.2%, $p<0.001$) compared to patients with low mNUTRIC score (≤ 4 points). High mNUTRIC score predicted 28-day mortality with area under the curve (AUC) of 0.797 (95% confidence interval: 0.738–0.856). **Conclusion:** High mNUTRIC score was associated with a higher 28-day mortality. The prognostic performance for 28-day mortality of the mNUTRIC score is clinically valid as indicated by AUC >0.7 and is comparable to the results of other validation studies. In addition, patients with high mNUTRIC score had increased ICU LOS and prolonged MV. © Malaysian Journal of Nutrition.

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