Nutrición Hospitalaria

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10.20960/nh.06013

12/17/2025

CE 6013

Integrating malnutrition diagnosis to strengthen nutritional biomarker interpretation in critical care

Integración del diagnóstico de malnutrición para reforzar la interpretación de los biomarcadores nutricionales en la atención crítica

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Dear Editor,

We read with great interest the article by Pérsico et al. titled “Urinary urea, nitrogen balance and mortality in critically ill patients – A prospective cohort study” (Nutr Hosp 2025;42(3):404-410) (1). The authors are congratulated for contributing to a challenging and underexplored field. The study provides insight into the prognostic value of nitrogen balance, urinary urea excretion, and urinary creatinine excretion (UCE) in critically ill patients.

While the findings are significant, we would like to raise a methodological concern that may influence the interpretation of the results. The study observed a positive correlation between UCE and anthropometric variables such as weight, body mass index, and calf circumference, suggesting a potential link with skeletal muscle mass.

The authors also assessed nutritional risk using NRS-2002 and the modified NUTRIC score. However, despite the use of malnutrition risk screening tools, diagnosis of malnutrition based on validated criteria, such as the GLIM (Global Leadership Initiative on Malnutrition) framework, would have added greater value. As UCE is heavily influenced by muscle mass (2), and muscle loss is a hallmark of malnutrition in critically ill patients (3), integrating a diagnostic approach like GLIM would have strengthened the interpretation of metabolic markers. GLIM criteria combine phenotypic and etiologic components, allowing a structured and objective classification of malnutrition (4). The use of GLIM criteria in ICU settings has been increasingly encouraged to enhance the clinical relevance of nutritional assessments (5,6). Since GLIM-defined malnutrition predicts adverse ICU outcomes, not assessing it may have led to confounding. Undiagnosed malnutrition and muscle loss could affect creatinine and nitrogen excretion regardless of disease severity, limiting the value of UCE as a nutritional surrogate (2,3).

Future studies should combine nitrogen metabolic parameters with standardized malnutrition diagnosis, such as GLIM, for a more comprehensive and clinically actionable analysis.

Once again, we commend the authors for addressing a relevant clinical question and hope our comments contribute to advancing nutrition assessment in the intensive care setting.

Conflict of interest: The authors declare no conflict of interest.

Artificial intelligence: The authors declare not to have used artificial intelligence (AI) or any AI-assisted technologies in the elaboration of the article.

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