

عنوان مقاله:

Association of plasma endotoxin and zonulin levels with Nutrition Risk in Critically ill score in intensive care unit patients

محل انتشار:

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خلاصه مقاله:

Background and Objective: Malnutrition can occur in 13-78% of acute care patients; it depends on the population studied and the screening tool employed, and is associated with increased mortality and morbidity. Nutrition Risk in Critically ill (NUTRIC) score is the first nutritional assessment tool used in ICU clinical practice. Increased intestine permeability has been also documented in critically ill patients. The early and adequate administration of nutrition support may play a vital role to preserve the intestinal barrier. In this descriptive and analytical cross sectional study, we sought to investigate the association of the intestinal permeability with NUTRIC score in ICU-hospitalized. **Materials and Methods:** A total of 150 ICU-hospitalized patients admitted between October 2017 and April 2018 in general ICU of Shohadaye Tajrish Hospital, Tehran, Iran. Patients who were ≥ 18 years old and admitted in ICU for more than 24h were included in our study. Patients who were died or discharged within 24h were excluded. For patients who were readmitted to the ICU, only data from their first admission was collected. Eligible patients or their legal representatives signed an informed consent. Approval for this study was granted by the Human Ethics Committee of Shahid Beheshti University of Medical Sciences. Nutrition status was estimated using a validated ICU-specific nutrition risk assessment tool, which is called NUTRIC score. It was calculated using the exact same thresholds and point system as developed previously. Plasma endotoxin and zonulin concentrations were measured in order to assess the intestinal permeability. All assays were performed as recommended by the manufacturers; tests were carried out in duplicates. Mann-Whitney test was conducted to compare variables across the two NUTRIC categories for continuous variables. Multivariate analyses were conducted using a binary logistic regression model to explore the potential association of higher nutritional risk category with increasing zonulin and endotoxin levels. **Findings:** The median age of participants was 64 years (IQR: 50-74) and 53% were men. Overall, 54% of patients

were classified as being at high nutritional risk using the mNUTRIC score algorithm; the proportion was 47% when using the NUTRIC score algorithm. Of the patients 32.7 % were glutamine deficient ($<420\mu\text{mol/L}$). Median plasma endotoxin and zonulin increased with increasing NUTRIC category in the overall study population ($P<0.05$), as ... well as in the glutamine-deficient subgroup ($P<0.05$). Our analyses, showed a significant association between

کلمات کلیدی:

critically ill patients, intestinal permeability, endotoxin, zonulin, NUTRIC, nutrition assessment

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