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ABSTRACT

Correlation of calorie intake with 24-hour urinary urea nitrogen level changes in critically ill patients at RSUI Depok, Indonesia

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Background and objective: Calorie together with protein intake has been proven to be important factors that play a role in critically ill patients. Hypermetabolism in the early acute phase increases energy expenditure and calorie requirement. Insufficient calorie intake will increase protein degradation for gluconeogenesis, which can be assessed by the level of 24-hour urinary urea nitrogen (UUN). Adequate daily calorie intake is expected to improve the UUN level in patients. This study aims to investigates the correlation of calorie intake with UUN level changes in critically ill patients.
Methods: An observational analytical study with a cross-sectional design on criticallyill patients at Intensive Care Unit RSUI Depok, aged 18-60 years. A total of 23 participants were included in the study. Calorie intake data were collected on the first 3 days and the level of UUN was assessed on days 3 and 7. Data were analyzed using SPSS to assess the correlation of calorie intake with UUN level changes.
Results: Calorie intakes mean from 21 participants on the first 3 days was 81.57±27.71%. The mean of UUN levels on day 3 and day 7 were 8.12±5.23 g and 7.18±6.56 g, respectively. There was a decrease in UUN level on the day 7, however, no significant correlation was found in this study between calorie intake and UUN level changes (p=0.2).
Conclusion: There is no significant correlation between calorie intake on the first 3 days with UUN level changes in critically ill patients.

Keywords: calorie intake, urinary urea nitrogen level changes, critically ill patients

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