The impact of protein provision on clinical outcomes in critically ill patient, receiving continuous renal replacement therapy

So Mi Kim, Seok Won Kim, Ji Hyun Jeon, Eun Kyoung Lee, Seong Chul Yoon, Jong Tae Cho
Department of Internal Medicine-Nephrology, Dankook University Hospital, Korea, Republic of

Objectives: The energy-protein deficit is known to be correlated with increased mortality in critically ill patients. Although the substantial protein loss during continuous renal replacement therapy (CRRT) procedure was expected, the tailored nutrition was overlooked. Therefore, we try to investigate the nutrition status and clinical outcomes according to protein provision in nutrition of critically ill patients, receiving CRRT.

Methods: A total of 46 intensive care unit (ICU) patient, receiving the CRRT was included. The nutritional requirements of patients were analyzed by nutritional support team, using Harris-Benedict equation. Adequate protein provision was defined as >80% of calculated protein target. The patients were divided into two groups based on protein provision. The clinical outcomes, including ICU stay and mortality rate were evaluated.

Results: The adequate protein provision (APP) group were 14 and inadequate protein provision (IAPP) group were 32. The mean daily protein intake was higher in APP group than that of IAPP group (60.2 vs 48.3 g/day, P=0.02). Although the ICU stay showed the prolonged tendency in IAPP group tendency, there was no significant difference (9.8 vs 6.7, p=0.12). The mortality rate also showed higher tendency in IAPP group than that of APP group, but there was no statistically significant difference (31.2 vs 28.5%, p=0.24).

Conclusions: Although there was no statistically significant difference, our study showed the poor prognosis in IAPP groups. Further prospective studies with large subjects are needed.