Comparison of clinical outcomes between Patients with and without Hematologic Malignancy after application of Continuous Renal Replacement Therapy

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Objectives: Continuous renal replacement therapy (CRRT) is a useful tool in critically ill patients with acute kidney injury (AKI) hospitalized to intensive care unit. However, the impact of CRRT in the critically ill patients with hematologic malignancy was unclear. Therefore, we investigated the outcomes of the patients with hematologic malignancy comparing to the patients without hematologic malignancy applying CRRT.

Methods: We included 158 patients received CRRT between January 2017 and December 2017. Finally, total 156 patients excluding 2 pediatric patients were enrolled. The patients were divided into three groups based on underlying disease as following: (1) non-malignancy group (n=49); (2) solid organ malignancy group (n=39); (3) hematologic malignancy group (n=65). We analyzed patient survival between the three groups.

Results: Mean age of total patients was 62.8 ± 14.2 years, and the hematologic malignancy group was younger than the other groups (P<0.01 for both). In regard to underlying disease, the hematologic malignancy group was lower prevalence of cardiovascular disease, autoimmune disease, and chronic kidney disease than non-malignancy group, but that was not different with solid organ malignancy group. Patient survival rate of the hematologic malignancy group was lower 1 month survival rate and overall survival rate than the other groups (Log-rank test, P<0.05 for both). However, renal survival rate of the hematologic malignancy group was not different between the other groups (P>0.05 for both).

Conclusions: The patient survival rate in the patients with hematologic malignancy was lower than that of the patients with non-hematologic malignancy.