

중환자실에서의 말기신부전 환자의 지속적 혈액투석여과법과 간헐적 혈액투석간의 임상적 결과에 대한 연구

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Comparison of Clinical Outcomes between CVVHF and Intermittent Hemodialysis in ESRD Patients in the Intensive Care Unit

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Background and objectives: ESRD (End-stage renal disease) patients with maintenance dialysis are more likely to require admission to intensive care unit (ICU). Continuous venovenous hemodiafiltration (CVVHDF) or intermittent hemodialysis (IHD) was adopted to ESRD patients according to several clinical factors in ICU. Although CVVHDF has many potential advantages, clinical outcomes compared to intermittent HD has not yet been demonstrated in ESRD patients in ICU. The aim of this study was to observe the outcomes of ESRD patients in ICU who were adopted CVVHDF or intermittent HD.

Design, setting, participants, & measurements: The retrospective study enrolled 85 ESRD patients (age >18 years) with maintenance dialysis (CVVHDF N=37, IHD N=48) in ICU. We assessed In-hospital mortality and clinical outcomes according to dialysis modality. The severity of illness was estimated at the time of admission in ICU and presented using the acute physiology and chronic health evaluation (APACHE) IV and sequential organ failure assessment (SOFA) scoring system.

Results: In-hospital mortality rate was significantly higher in CVVHDF group compared with HD group (40.5% vs 12.5%, $p<0.05$). CVVHDF was applied to the more severe patients who has SOFA (10 ± 2.9 vs 7.1 ± 1.4 , $p<0.001$), APACHE IV score (89.7 ± 19.5 vs 69.3 ± 14.3 , $p<0.001$) which were higher than HD group. Crude relative risk of in-hospital mortality for CVVHDF was 4.77 (95% CI 1.62-14.02, $p<0.05$). Adjusted for age, SOFA, APACHE IV, vaso-pressor and ventilator, the relative risk of in-hospital mortality for CVVHDF was not statistically significant (RR 0.26, 95% CI 0.01-5.46).

Conclusion: Among critically ill ESRD patients in ICU, CVVHDF seems to be associated with increased in-hospital mortality. However, adjusted relative risk was not statistically significant, it can be explained by the fact that CVVHDF was applied to more severe ill patients.

Key Words: 만성신부전, 혈액투석, 지속적 혈액투석여과법
Chronic kidney disease, Hemodialysis, CVVHDF