

급성신손상이 발생한 중환자에서 지속적신신대체요법의 최적시기 및 임상적 결과

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Optimal Timing of CRRT and Clinical Outcomes in Critically Ill Patients with AKI

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Introduction : The optimal timing of CRRT in AKI is controversial. We evaluated the relationship between starting CRRT in 'early' and 'late' stage and clinical outcomes to find out significant factors.

Methods : We performed a retrospective single center study from Oct 2007 to Oct 2009 enrolling 458 patients. Timing of CRRT was stratified into 'early' and 'late' according to BUN, creatinine level at the time of CRRT was started, and also by urine output during 6h, 12h, 24h before CRRT was started. Lastly, we stratified into 'early' and 'late' by RIFLE criteria 'Injury' and 'Failure' group. The main outcome was CRRT duration, ICU stay, hospital stay and 120day-mortality.

Results : CRRT timing by creatinine showed no significant difference in survival ($p=0.146$), but in terms of BUN, they had longer survival ($p=0.013$). When stratified by 6h-, 12h-, 24h-urine outputs before CRRT, patients with less urine output at 6h and 12h before CRRT had significant higher multivariate-adjusted, 120day-mortality. (6h: OR 1.45, 95% CI 0.99-2.15, $p=0.005$, 12h: OR 1.69, 95% CI 1.14-2.39, $p=0.008$). Finally, when CRRT was started at 'Failure' stage of RIFLE criteria compared with 'Injury' stage, the multivariate adjusted OR for death was 1.74 (95% CI 1.15-2.64). CRRT duration, ICU stay and hospital stay had no clinical significant correlation between 'early' and 'late' group.

Conclusion : Patients with AKI who has low BUN at the time of CRRT and high urine output before 6 hours, 12 hours before CRRT had longer survival rates. Patients who start CRRT at 'Injury' stage of RIFLE criteria has survival benefit compared with 'Failure' stage.

Key Words : 급성신손상, 지속적신신대체요법, 최적시기
AKI, CRRT, Optimal timing