

## 지속적 신 대체 요법으로 치료한 중환자에서의 nafamostat mesilate의 효과

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### Effect of Nafamostat Mesilate as an Anticoagulant during Continuous Renal Replacement Therapy in Critically Ill Patients

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**Introduction:** The use of continuous renal replacement therapy (CRRT) is considered the favored renal replacement therapy modality in patients with hemodynamic intolerability. An important limitation of CRRT is the need for prolonged anticoagulation to prevent extracorporeal filter clotting and failure. Nafamostat mesilate, a serine proteinase inhibitor, is characterized by short half life resulting in little systemic anticoagulation effect. The aim of this study was to evaluate the effect of nafamostat mesilate on circuit patency of CRRT and the relationship of nafamostat mesilate with survival rate in continuous renal replacement for acute kidney injury receiving CRRT.

**Methods:** We retrospectively reviewed 115 patients with AKI treated with CRRT between March 2005 and December 2012. We divided the patients into 2 groups according to the anticoagulants used during CRRT. Among 115 patients, 85 patients (73.9%) were treated with continuous nafamostat mesilate infusion and remaining 30 patients (26.1%) were treated with unfractionated heparin for continuous venovenous hemodiafiltration anticoagulation.

**Results:** The median filter survival with nafamostat mesilate was significantly greater than heparin (24.2 versus 17.4 hours,  $p=0.021$ ) and Kaplan-Meier survival plots revealed the longer survival of the circuits using nafamostat mesilate than heparin ( $p=0.014$ ). In Cox proportional hazard models, nafamostat mesilate predicted longer filter survival (hazard ratio 0.59, 95% confidence interval 0.38-0.92,  $p=0.020$ ). And nafamostat mesilate group showed a significantly lower 30 days mortality rate compared to heparin group (40.0 %versus 63.3%,  $p=0.028$ ). In multivariate Cox analysis, patient survival was significantly higher in the nafamostat mesilate group than heparin group (hazard ratio 0.46, 95% confidence interval 0.25-0.84,  $p=0.011$ ).

**Conclusions:** As compared with heparin, nafamostat mesilate anticoagulation was associated with prolonged filter survival and 30 days survival compared with heparin. These data suggest that nafamostat mesilate is a good choice for anticoagulant with prolonged filter survival and 30 days survival during CRRT in critically ill patients. Nafamostat mesilate can be used as a safe and effective regional anticoagulant for continuous renal replacement therapy.

**Key Words:** 지속적 신 대체 요법, 후탄, 항응고제

Continuous renal replacement therapy, Nafamostat mesilate