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지속적 신대체요법에서 nafamostat mesilate를 이용한 항응고요법

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Nafamostat Mesilate for Anticoagulation in Continuous Renal Replacement Therapy

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Background : During continuous renal replacement therapy (CRRT), anticoagulation of the extracorporeal circuit is required. Although heparin is the most common choice of anticoagulant, it might be associated with bleeding and thrombocytopenia. Therefore, several drugs have been used as an alternative anticoagulant such as citrate. We conducted retrospective study to assess the efficacy and safety of nafamostat mesilate, a serine protease inhibitor, compared with heparin.

Methods : We reviewed the medical records of the 138 patients treated with CRRT in the intensive care unit (ICU), Myongji hospital, Goyang, Korea from January 2007 to December 2008. We excluded the patients who died within the first circuit use.

Results : 121 patients with 593 circuits were included in this study. As an initial anticoagulation, heparin is used in 37 patients (30.6%) and nafamostat mesilate in 11 (9.1%). There was no difference in age, sex, APACHE II, SAPS II, laboratory data and survival according to initial anticoagulant. We excluded 23 circuits used in systemic anticoagulation. Among the 570 circuits, 337 circuits (59.1%) received no anticoagulation, 180 (31.6 %) heparin, and 53 (9.3%) received nafamostat mesilate. Overall median filter life span with nafamostat mesilate was significantly greater than heparin (19 vs 14 hours, $p<0.01$) and Kaplan-Meier survival plots revealed the longer survival of the circuits with nafamostat mesilate than heparin or without anticoagulation. Although nafamostat mesilate induced aPTT prolongation in 5 circuits (9.4%) contrast to 5 (2.7%) in heparin, bleeding episodes were not increased.

Conclusion : Nafamostat mesilate anticoagulation was associated with prolonged filter survival compared with heparin. These data suggests that nafamostat mesilate is a good choice for anticoagulant during CRRT in critically ill patients.

Key Words : 지속적 신대체요법, 항응고요법, nafamostat Nafamostat mesilate, CRRT, Anticoagulation

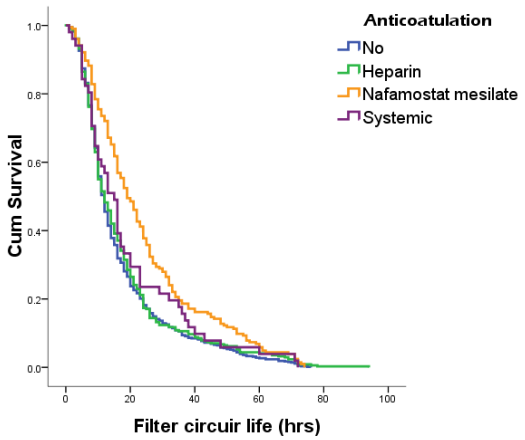

Fig. 1. Comparison of CRRT circuit life with heparin, systemic anticoagulation, nafamostat mesilate or no anticoagulation.