

AKIN 기준에 따른 병원에서 발생한 급성신손상에 대한 역학 연구

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Epidemiology of De Novo Acute Kidney Injury Hospitalized Patients According to AKIN criteria

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Background : The Acute kidney injury network (AKIN) criteria are new international consensus definitions for acute kidney injury. We aimed to identify the incidence of AKI and its risk factors and the relationship between AKI stages and mortality in hospitalized patients.

Methods : A total of 8,207 consecutive patients hospitalized during a 6 month period between September 2007 and February 2008. Using electronic hospital database, all the creatinine values were monitored during the hospitalized period. Of 8,207 patients, 96 cases met the criteria for de novo acute kidney injury. Demographic details, comorbidities, laboratory and outcome data were analyzed for the patients with de novo acute kidney injury.

Results : De novo acute kidney injury developed in 1.2% of all hospitalized patients and 5.2% of intensive care unit admissions. Mean age of the patients with acute kidney injury was 63.3 ± 13.6 years with 58 men (60.4%). Among the patients with acute kidney injury, 12.5% received renal replacement therapy and 3.1 % progressed to end-stage renal disease required maintenance dialysis. 28 patients (2.92%) had stage I, 35 (36.5%) had stage II, and 33 (34.4%) had stage III acute kidney injury. Percentage of the patients with baseline proteinuria was significantly higher in stage III patients compared to stage I or II. However, diabetes, age, gender and other underlying diseases were not significantly different among the groups. The hospital mortality was significantly higher for patients with AKI than those without (32.3 % versus 0.9 %; $p < 0.0001$). There was also a significant increase in hospital mortality in stage III patients compared to stage I or II (25.5%, 20.0%, and 51.5% for stage I, II and III, respectively). In patients with AKI, risk factors for mortality were underlying malignancy (odds ratio [OR], 7.30; 95% CI, 2.05 to 25.4), usage of diuretics (OR, 4.36; 95% CI, 1.33 to 14.33), ICU admission before AKI (OR, 4.10; 95% CI, 1.19 to 14.09), and stage III AKI (OR, 5.02; 95% CI, 1.21 to 20.77).

Conclusion : Acute kidney injury as defined according to the AKIN classification is useful in predicting hospital mortality. The significance of baseline proteinuria as a risk factor for acute kidney injury should be studied in large multicenter studies.

Key Words : 급성 신손상, 병원, 역학

Acute kidney Injury, Acute kidney injury network, Epidemiology