

Abstract Type : Poster
Presentation No. : PAK 015

Hyperuricemia is associated with acute kidney injury and all-cause mortality in hospitalized patients

Min Woo Kang, Donghwan Yun, Minjung Kang, Soie Kwon, Ho Jun Chin, Ki Young Na, Kwon-Wook Joo, Yon Su Kim, Sejoong Kim, Seung Seok Han
Department of Internal Medicine-Nephrology, Seoul National University Hospital, Korea, Republic of

Objectives: Hyperuricemia as a risk factor of high morbidity and mortality has been documented in several disease status. Nevertheless, the relationship between uric acid (UA) and the risks of acute kidney injury (AKI) and mortality remains unresolved in hospitalized patients.

Methods: All patients (aged ≥ 17 years old) admitted to Seoul National University Bundang Hospital from January 2013 to December 2013 were retrospectively reviewed. UA at the time of admission was categorized based on the quartiles. Odds ratio (OR) for AKI and hazard ratio (HR) for all-cause mortality were calculated after adjustment of multiple variables. All the analyses were stratified by gender.

Results: The 4th quartile UA group (male, UA ≥ 6.8 mg/dL; female, UA ≥ 5.4 mg/dL) showed a higher risk of AKI than the 1st quartile group (male, UA < 4.4 mg/dL; female, UA < 3.5 mg/dL) as following ORs: 3.2 (2.53-3.91) in males ($P < 0.001$); and 2.8 (2.17-3.59) in females ($P < 0.001$). There were more patients who did not recover from AKI in the 4th quartiles than in the 1st quartiles, as following ORs: 1.5 (1.11-1.95) in males ($P < 0.001$); and 2.5 (1.63-3.98) in females ($P < 0.001$). The 4th quartile group had a higher risk of all-cause mortality than the 1st quartile group, as following HRs: 2.0 (1.38-2.86) in males ($P < 0.001$); and 1.3 (1.09-1.51) in females ($P = 0.003$). The in-hospital mortality risk was also higher in the 4th quartile than in the 1st quartile, which was only significant in males: OR, 2.4 (1.56-3.77) ($P < 0.001$).

Conclusions: Hyperuricemia increases the risks of AKI and all-cause mortality in hospitalized patients.