

## KSN 2017 Abstract

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### Relationship between Serum Uric acid and Mortality in Korean Hemodialysis Patients: Results from End-Stage Renal Disease registry

Chang seong KIM<sup>1</sup>, Minah KIM<sup>2</sup>, Hong sang CHOI<sup>2</sup>, Ha yeon KIM<sup>2</sup>, Dong-chan JIN<sup>3</sup>, Seong kwon MA<sup>1</sup>, Eun hui BAE<sup>1</sup>, \*Soo wan KIM<sup>1</sup>

<sup>1</sup>Department of Internal Medicine, Chonnam National University Medical School, Korea, South, <sup>2</sup>Departement of Internal Medicine , Chonnam National University Hospital , Korea, South, <sup>3</sup>Department of Internal Medicine, Catholic University, Seoul, Korea, South

**Objectives** : Hyperuricemia is associated with lower risk of mortality in hemodialysis patients, contrary to the general population. However, there are limited data on the relationship of uric acid to all-cause and cardiovascular mortality in Korean maintenance hemodialysis patients. The objective of this study was to determine the impact of serum uric acid level on long-term clinical outcomes in a cohort of Korean hemodialysis population.

**Methods** : We examined data from the End-Stage Renal Disease Registry of the Korean Society of Nephrology on patients receiving hemodialysis between January 2001 and April 2015. During the study period, 7333 patients who had one or more serum uric acid measurement were included in the analysis [mean age, 61 ± 14 years; 4471 (61.0%) were men]. All laboratory data were based upon the initial measurement of a cohort of hemodialysis patients.

**Results** : Mean serum uric acid level was 7.1 ± 1.7 mg/dl. Body mass index, normalized protein catabolic rate, albumin and cholesterol were positively correlated with serum uric acid level, even after adjustment for age and sex. In multivariable Cox proportional hazard models accounting for demographics, comorbidity and residual renal function, higher uric acid level was independently associated with a significantly lower all-cause mortality (hazard ratio [HR], 0.90; 95% confidence interval [CI], 0.83–0.97 per 1mg/dL higher uric acid level; P =0.008). Comparing the highest quintile of uric acid level with lowest quintile, HR for all-cause mortality was 0.65 (95% CI, 0.42–0.99; P=0.046). However, there was no association between serum uric acid level and cardiovascular mortality after adjustment (HR, 0.90; 95% CI, 0.80–1.01; P=0.078).

**Conclusions** : Hyperuricemia was strongly associated with a lower risk of all-cause mortality, but not associated with cardiovascular mortality in Korean patients underwent hemodialysis.

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**Keywords** : hemodialysis, hyperuricemia, mortality, Korean