

혈중 요산 수치가 만성신부전 환자의 신기능 저하에 미치는 영향

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Uric Acid as a Risk Factor for Progression of Chronic Kidney Disease (CKD)

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Background : High serum uric acid level is often associated with chronic renal disease. Recently, it has been reported to be a risk factor for progression and developing end-stage renal disease in moderate CKD.

Method : This study is performed by retrospective analysis of 455 stage III and IV CKD patients. Participants were new OPD patients of Seoul National University Hospital nephrology from October 2002 to January 2004 who had been followed up at least over one year. Kidney disease progression was defined as decrease of estimated GFR (eGFR) more than 5ml/min/1.73m². Renal survival was determined from the day of first examination to the initiation of renal replacement therapy.

Results : Mean age of the subjects was 56.3±15.0 year-old, mean baseline uric acid was 7.1±1.9 mg/dl, and mean baseline eGFR 40.4±12.3 ml/min/1.73m². The high serum uric acid level was significantly associated with low estimated GFR, hypertension and gout history. After 42.4±15.1 months' follow up, Ninety two patients had been in renal replacement therapy and 31 died without ESRD. In one hundred and thirty one patients eGFR decreased more than 5ml/min/1.73m² during their follow up period. Underlying causes of CKD were not different among the patients according to the serum uric acid level except ADPKD patients. The serum uric acid levels were relatively lower than other subjects whose uric acid levels were comparable to those of ADPKD patients. Uric acid levels were associated with great odds ratio of kidney disease progression (odds ratio, 1.135; confidence interval, 1.01 to 1.28) and high incidence of ESRD (odds ratio, 1.21; confidence interval, 1.05 to 1.40), adjusted for age and baseline eGFR.

Conclusion : This result supports that uric acid might be an independent factor for CKD progression. However larger scale prospective study should be needed to determine what the optimal level of uric acid is for CKD patients.

Key Words : 요산, 만성신부전, 신기능저하

Uric acid, Chronic kidney disease, Renal progression