

## 만성콩팥병 환자에서 24시간 요나트륨 배설량과 고혈압과의 관계

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### Relationship between 24 Hours Urinary Sodium and Hypertension in Patient with Chronic Kidney Disease

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**Introduction:** It was well known that there was an increment of blood pressure according to the amount of 24 hours urinary sodium in patient with chronic kidney disease. But there were few studies about the morbidity of heart disease with 24 hours urinary sodium. Therefore we studied the association of heart function and the amount of 24 hours urinary sodium.

**Method:** Among KNOW-CKD patient cohort, we studied the association of heart function and 24 hours urinary sodium in 205 patients who had test results of appropriated urine collection judged by the urine creatinine. We analyzed the variables in 4 groups divided by the quartile range of 24 hours urinary sodium.

**Result:** The amount of 24 hours urinary sodium was group I ( $\leq 118.8$ ,  $89.61 \pm 22.13$  mEq/L), group II (118.8-159.0,  $137.43 \pm 11.87$  mEq/L), group III (159.0-226.8,  $186.47 \pm 19.57$  mEq/L), group IV ( $> 226.8$ ,  $264.18 \pm 36.11$  mEq/L). The more the amount of 24 hours urinary sodium was, the higher the level of waist circumference, SBP/DBP, 24 hours urinary uric acid, GFR was (all  $p < 0.05$ ). Also there was no difference of prevalence of hypertension, the level of coronary calcium score, ejection fraction, left ventricular mass index (LVMI), urinary angiotensinogen, the decrement of renal function (defined by the decrement of GFR 3 ml/min/year) among groups. In multivariate analysis, we observed the decrement of urinary angiotensinogen with the increment of 24 hours urinary sodium in group II ( $\beta = -11.99$ ,  $R^2 = 0.126$ ,  $p = 0.037$ ).

**Conclusion:** We observed that the more the amount of 24 hours urinary sodium was, the higher the blood pressure was. But we couldn't observe the effect of 24 hours urinary sodium on heart function such as LVMI. We thought that long-term studies were needed for discovering the association of hypertension, renal/heart function and serum uric acid.

**Key Words:** 만성콩팥병, 24시간 요나트륨, 심장기능

Chronic kidney disease, 24hours urinary sodium, Heart function