

## 만성 신질환 환자의 하루 나트륨 섭취량을 측정하기 위한 평균 임의뇨나트륨농도의 유용성

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### Use of Mean Spot Urine Sodium Concentrations to Estimate Daily Sodium Intake in Patients with Chronic Kidney Disease

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**Objective:** This study evaluated use of the mean value of three spot urine sodium (UNa) concentrations to estimate daily sodium intake in patients with CKD.

**Design:** This cross-sectional study enrolled 305 CKD patients, none of whom were on dialysis, who visited the Nephrology Clinic at the Asan Medical Center (Seoul, Korea). We performed three spot UNa tests, three calculations of the urinary sodium/creatinine ratio (UNa/UCr), one measurement of 24HUNa, and one measurement of sodium intake by dietary recall.

**Results:** The correlation coefficient between 24HUNa and mean spot UNa was 0.477 (95% CI: 0.384, 0.562,  $p < 0.001$ ), slightly higher than that between 24HUNa and mean spot UNa/UCr ( $r = 0.313$ , 95% CI: 0.207, 0.465,  $p < 0.001$ ). The ratio of 24HUNa to mean spot UNa was  $1.69 \pm 0.79 : 1$ , including that a 24HUNa level of 87 mEq (equivalent to 2 g daily sodium intake) corresponds to mean spot UNa  $63 \pm 30$  mEq/L. The correlation coefficient between sodium intake and mean spot UNa was 0.435 (95% CI: 0.336, 0.524,  $p < 0.001$ ), significantly higher than that between sodium intake and mean spot UNa/UCr ( $r = 0.197$ , 95% CI: 0.091, 0.301,  $p = 0.001$ ). Mean spot UNa tended to be better correlated with 24HUNa than with sodium intake.

**Conclusion:** Mean spot urinary sodium is a simple and effective method that can be used to monitor sodium intake in patients with CKD. We recommend that mean spot urinary sodium be maintained at less than 63 mEq/L in these patients.

**Key Words:** 나트륨 섭취량, 임의뇨나트륨  
Sodium intake, Spot urine sodium