

알부민뇨가 있는 고혈압 환자들에서 저염식이 안지오텐신 수용체 억제제 (올메살탄)의 단백뇨 감량 효과 증가에 미치는 영향

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Effects of Low Sodium Intake on the Anti-proteinuric Efficacy of Olmesartan in Hypertensive Patients with Albuminuria (ESPECIAL)

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Blockade of the renin angiotensin aldosterone system (RAAS) is well known to reduce albumin excretion rate and considered a mainstay of therapy in the prevention of end stage renal disease. The antiproteinuric effect of RAAS blockade can be magnified by dietary salt restriction. The aim of this study was to determine the effect of low salt diet in the patients who is taking Olmesartan on blood pressure, urine protein excretion, and the correlation with hemoglobin and erythropoietin. This study is open label randomized controlled trial. During a run-in period of eight weeks, patients received Olmesartan. Additional antihypertensive medication was allowed during the study except for another RAAS blockades. After the run-in period, patients were divided into two groups. One group was treated for another eight weeks with Olmesartan plus usual clinical management and the other group was treated for eight weeks with Olmesartan plus weekly education on low salt diet. A total of 263 adult recipients were enrolled, and we performed interim analysis with 156 patients who were followed their 16th week visit.

During a run-in period, daily urinary albumin excretion was significantly decreased after taking Olmesartan for eight weeks (from 862.4±861.3, to 477.6±631.7 mg/day, $p<0.001$ by paired t-test). Recipients with low salt diet education, showed the tendency of more decreased urinary albumin excretion compared to control group although statistically insignificant (for Δ proteinuria, 117.7 vs. -24.2 mg/day, $p=0.08$ by independent t-test). The rate of more than 25% reduction in proteinuria was higher in the recipients with low salt diet education (62.2% vs. 40.2%, $p=0.024$). Urinary sodium excretion for 24-hr was decreased 19.4 mEq/day in low salt diet education group by mean value. In subgroup analysis by urinary sodium excretion amount, with more reduction in 24-hr urinary sodium excretion, there were tendency of more decrease in systolic BP and urinary albumin excretion (for Δ sBP, 11.2 vs. 6.4 vs. 6.7 mmHg, $p>0.05$; for Δ proteinuria, 526.7 vs. 384.1 vs. 345.4 mg/day, $p>0.05$).

The reduction in salt intake reduced urine protein excretion and systolic BP in RAAS blockade treated nondiabetic Korean hypertensives. Full data analysis is needed for more convincing statistical significances.

Key Words: 저염식, 알부민뇨/단백뇨, 올메살탄

Low salt diet, Albuminuria/proteinuria, Olmesartan