KSN 2017 Abstract

KSN-17-C003

The Association of RAAS Blockade and the Progression of Residual Kindey Function Decline: A Nation-wide Prospective Cohort Study

Kyung don YOO[1], Clara KIM[2], Yun kyu OH[3], Shin-wook KANG[4], Chul woo YANG[5], Yong-lim KIM[6], Yon su KIM[7], Chun soo LIM[3], *Jung pyo LEE[3]

[1]Department of Internal Medicine, Division of Nephrology, Department of Internal Medicine , Dongguk University Gyeongju Hospital , Korea,South, [2]School of Public Health, School of Public Health, Seoul National University, Korea,South, [3]Department of Internal Medicine, Seoul National University Boramae Medical Center, Korea,South, [4]Department of Internal Medicine, Yonsei University College of Medicine, Korea,South, [5]Department of Internal Medicine, The Catholic University of Korea College of Medicine, Korea,South, [6]Department of Internal Medicine, Kyungpook National University School of Medicine, Korea,South, [7]Department of Internal Medicine, Seoul National University College of Medicine, Korea,South

Objectives : Our aim was to evaluate the clinical effects of renin angiotensin aldosterone system (RAAS) blockade on residual renal function(RRF) in newly diagnosed patients with end-stage renal disease (ESRD) undergoing hemodialysis in Korea.

Methods : A total of 920 patients were enrolled in the Clinical Research Center for ESRD prospective observation cohort. RAAS treatment was defined as the used of angiotensin converting enzyme inhibitor or angiotensin receptor blocker for >3 months. RRF were defined using 24-hour urine volume and Creatinie Clearance, measured at 3 and 12 months after dialysis initiation. Effects of RAAS blockade on RRF were evaluated using logistic regression.

Results : There were 269 incident dialysis patients were completely measured RRF at three and twelve month after dialysis initiation. The 145 patients (54%) were in the RAAS group. The RAAS and control groups were comparable in terms of age, sex, primary renal disease, comorbidities, and dialysis dose including Kt/V, ultrafiltration volume per session. The RRF in both group decreased over a 12-month period. However, the decline of RRF between two groups were not statistically significant after adjustment for RRF at 3month (ANCOVA analysis). The development of anuria (24hr urine volume < 100ml) at 12 months was similar in both groups (39.3% vs. 41.1%, RAAS group vs. control group). On the logistic regression analysis, RAAS did not provide a protective effect on RRF preservation after adjustment for age, sex, diabetes history, blood pressure and ultrafiltration volume (Odds ratio 1.27 95% CI

0.72-2.26, p=0.404).

Conclusions : In Korean patients with ESRD, RAAS blockade failed to clarify the protective effect for RRF. Further research needed to provide optimal treatment for preservation of RRF, especially in Korean patients with incident dialysis.

Keywords : Hemodialysis; residual renal function; RAAS blockade