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# 만성콩팥병 환자에서의 중심동맥 혈압

제주한라병원 내과

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# Distribution and Prognostic Value of Central Blood Pressure in Chronic Kidney Disease

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**Background:** Central blood pressure (CBP) has been shown to be a better predictor for cardiovascular events and target organ damages than brachial blood pressure in recent studies. However, little is known about comparative values of CBP and brachial BP in chronic kidney disease (CKD) population. In this study, we investigated the distribution of CBP and evaluated the comparative values of CBP and brachial BP for the prediction of renal progression in both CKD and non-CKD population.

**Methods:** We conduct this study using data from 868 subjects who underwent CBP measurement by the radial artery tonometric method in a single medical center between 2009 and 2013. Demographic and clinical characteristics were obtained from a review of the medical records at the time of CBP measurement. The outcome was renal progression defined as decline of estimated glomerular filtration rate (eGFR) greater than 30% of baseline during the follow-up.

**Results:** In overall, estimated central systolic BP (cSBP) was higher than brachial systolic BP (bSBP). The cSBP was significantly increased with age in non-CKD group, but such a correlation was not observed in CKD group. In CKD population, high cSBP group with greater than mean cSBP value (≥150 mmHg) had significantly increased probability of renal progression (p=0.016), while high bSBP group (≥140 mmHg) did not predict the outcome (p=0.370). In contrast, the predictor of renal progression was high bSBP not cSBP in non-CKD population. In Cox analysis adjusted for age, sex, diabetes, ischemic heart disease, serum albumin, and total cholesterol, high cSBP remained a predictor of renal progression in CKD population (HR 5.408; 95% CI 1.008-29.030; p=0.049), whereas high bSBP was not a significant predictor in non-CKD population (HR 2.893; 95% CI 0.786-10.650; p=0.110).

**Conclusion:** The CBP had different correlation with age and clinical significance according to presence or absence of CKD, and the high cSBP was strong independent predictor of kidney disease progression in CKD patients.

**Key Words:** 중심동맥혈압, 만성콩팥병
Central blood pressure, Chronic kidney disease