

## 신이식이 좌심실 리모델링에 미치는 효과와 이식 후 좌심실비대의 위험인자에 대한 분석연구

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### Effect of Kidney Transplantation on Left Ventricular Remodeling and Risk Factors for Post Transplant Left Ventricular Hypertrophy

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**Introduction:** Cardiovascular disease is a leading cause of mortality in patients with end-stage renal disease, even undergoing transplantation. Left ventricular hypertrophy (LVH) is the most common feature and an independent risk factor for cardiac complications in kidney transplant recipients. The aim of this study was to identify cardiac alteration after kidney transplantation and analyze predictors of the post-transplant LVH.

**Methods:** Among 2957 kidney transplant recipients in a multicenter cohort from 1997 to 2012, a total of 206 patients who conducted echocardiography before and one year after transplantation were enrolled in this study. Echocardiographic findings and clinical parameters were evaluated.

**Results:** Kidney transplantation significantly reduced mean left ventricular mass index (LVMI) from  $128.8 \pm 47.2 \text{ g/m}^2$  to  $106.4 \pm 33.0 \text{ g/m}^2$  ( $p < 0.001$ ) (Fig. 1). The ejection fraction was improved ( $59.4 \pm 8.0\%$  vs.  $62.1 \pm 6.7\%$ ,  $p < 0.001$ ). The prevalence of LVH by echocardiography significantly decreased ( $62.6\%$  vs.  $46.1\%$ ,  $p = 0.001$ ). The prevalence of diastolic dysfunction, mitral and tricuspid regurgitation, and pulmonary hypertension also decreased. Pre-transplant lower hemoglobin level (OR 0.74, 95% CI 0.56-0.96,  $p = 0.026$ ) and pre-transplant higher LVMI (OR 1.02, 95% CI 1.01-1.02,  $p < 0.001$ ) were independently associated with persistent LVH after kidney transplantation. On the other hand, ejection fraction, diastolic dysfunction, underlying renal disease, albumin or cholesterol level, blood pressure, rejection, and allograft function were not correlated with post-transplant LVH.

**Conclusions:** Cardiac morphology and function were significantly improved by kidney transplantation. Treatment of anemia might be crucial in regression and prevention of persistent LVH in kidney transplant recipients.

**Key Words:** 신장이식, 좌심실비대

Kidney transplantation, Left ventricular hypertrophy

