

## 신이식 전 좌심실 이완기 기능장애 및 좌심방비대가 이식 후 결과에 미치는 영향

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### The Prognostic Significance of Preoperative Diastolic Dysfunction of the Left Ventricle and Left Atrial Enlargement on Clinical Outcomes in Kidney Transplantation

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**Background:** Echocardiography is commonly performed as a screening test to evaluate cardiac function before kidney transplantation (KT). Identification of high-risk patients for cardiovascular (CV) disease is important to offer appropriate management before KT. However, there are only limited data regarding the prognostic significance of left ventricular diastolic dysfunction (LVDD) and left atrial enlargement (LAE) on outcomes of KT.

**Methods:** We reviewed 2,957 adult recipients who underwent pretransplant echocardiography from 1997 to 2012 in order to evaluate the prognostic significance of preoperative markers of LVDD and LAE. The LVDD was defined referring to the recommendations of the European Study Group on Diastolic Heart Failure and was divided by 4 grades: 0 (normal); 1 (relaxation abnormality); 2 (pseudonormalization); and 3 (restrictive pattern). The patients with grade 0 and grade 1 and patients with grade 2 and grade 3 were combined and analyzed, respectively.

**Results:** During the observation period (mean 54.1 months), the recipients with LVDD grade 2-3 showed higher occurrence of major adverse cardiac events (MACE) ( $p=0.001$ ), and graft failure ( $p=0.005$ ). All-cause mortality was not different between the groups depending on the LVDD grades. The recipients with LAE tend to be associated only with the occurrence of the MACE ( $p=0.002$ ). In a multivariate analysis, increased age ( $p=0.001$ ), previous history of CV event ( $p<0.001$ ) and LVDD of grade 2-3 (hazard ratio: 4.076, 95% confidence interval: 1.667-9.966;  $p=0.002$ ) were associated with MACE. The recipients with LAE also showed significantly higher occurrence of MACE in a multivariate analysis (hazard ratio: 3.172, 95% confidence interval: 1.069-9.41;  $p=0.037$ ). Graft failure and all-cause mortality were not showed significant differences in both recipients with LVDD and LAE in a multivariate analysis.

**Conclusion:** The echocardiographic findings of LVDD and LAE before kidney transplantation may increase the risk of developing cardiovascular event.

**Key Words:** 신이식, 이완기 기능부전, 좌심방비대

Kidney transplantation, Diastolic dysfunction, LAE