

## 신이식 환자 관상 동맥 질환의 유병률 및 중증도 평가시 관상동맥 컴퓨터 단층촬영 혈관조영술의 임상적 유용성

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### Clinical Significance of Multidetector Coronary CT Angiography to Evaluate the Prevalence and Severity of Coronary Artery Disease in Renal Transplant Recipients

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**Introduction:** Cardiovascular disease is one of the leading cause of mortality in renal transplant recipients. Noninvasive coronary angiography using multidetector computed tomography (MDCT) is feasible with high sensitivity and negative predictive value to evaluate coronary artery disease (CAD). However, few studies have been conducted to examine the applicability of MDCT in renal transplant. The current study is designed to evaluate the prevalence and severity of CAD in renal transplant recipients.

**Patients and Methods:** Between September 2011 and February 2013, multidetector coronary CT angiography was performed on 55 renal transplant recipients who had no pre-transplant CAD history and stabilized post-transplant renal function between 6 months and 18 months. Using the results of MDCT (significant CAD were defined as 50% lumen diameter reduction), we divided our study population into two groups, no CAD (n=26, 47.3%) and CAD (n=29, 52.7%). Severity of CAD by MDCT was also categorized as follows: mild CAD (<50%), ≥50% in one vessel, two vessels [or in the proximal left anterior descending (LAD)], and three vessels (or left main).

**Results:** Among the risk factor of CAD, pre-transplant diabetes mellitus (DM) and high density lipoprotein (HDL) were significant factor of CAD (p=0.044 and p=0.015, respectively). Smoking history, low density lipoprotein (LDL), lipoprotein A, duration of dialysis were not statistically significant. Coronary calcium score by Agatston method was also significantly higher in CAD recipients (p=0.002). More than 60% of CAD recipients had mild obstructive (<50%) lesions and 34.5% of CAD recipients had more than one-vessel obstructive lesions in multidetector coronary CT angiography.

**Conclusions:** This study showed that the multidetector coronary CT angiography is a useful and noninvasive method for detecting of CAD even in stabilized renal transplant recipients.

**Key Words:** 신장 이식, 관상동맥질환, 컴퓨터 단층촬영

Kidney Transplantation, Coronary artery disease, Coronary CT