

**Abstract Type : Poster**

**Abstract Submission No. : 1232**

## **Survival benefit of kidney transplantation among patients with end-stage renal disease and acute myocardial infarction history: A national population-based study**

**Soo Yeon Choi**<sup>1</sup>, Dong Hui Shin<sup>1</sup>, Jae Seok Kim<sup>1</sup>, Byoung Geun Han<sup>1</sup>, Jae Won Yang<sup>1</sup>, Seung Ok Choi<sup>1</sup>, Deok Gie Kim<sup>2</sup>, Jun Young Lee<sup>1</sup>

<sup>1</sup>Department of Internal Medicine-Nephrology, Wonju Severance Christian Hospital, Korea, Republic of

<sup>2</sup>Department of Surgery-Transplantation, Yonsei University College of Medicine, Korea, Republic of

**Objectives:** Coronary artery disease is often associated with patients with end stage renal disease (ESRD) and is risk factor for major adverse cardiovascular event (MACE) after kidney transplantation (KT). In addition, patients with ESRD who experienced acute myocardial infarction (ESRDcAMI) have less access to KT. This study aims to compare cardiovascular outcome and survival ESRDcAMI.

**Methods:** ESRDcAMI were extracted using the National Health Insurance Service Claim data system between January 2007 and December 2018. Moreover, all-cause mortality, cardiovascular mortality, myocardial infarction, and cerebrovascular disease were compared using a 1:5 propensity score matching (288 KT group and 1440 Dialysis group).

**Results:** Cumulative all-cause mortality and major adverse cardiovascular event (MACE) incidence was 4.7% and 6.0% at 1 years in the KT group. While cumulative all-cause mortality and MACE incidence was 14.4% and 16.3% at 1 years in the Dialysis group. Multivariable cox analyses showed that the hazard ratio of all-cause mortality and MACE were 0.23 (95% confidence interval (CI), 0.16-0.34) and 0.36 (95% CI, 0.25-0.52), respectively, over mean 48.3 ± 38.6 months follow-up duration. Subgroup analysis according to age, gender, AMI treatment method, interval from AMI to first dialysis or KT, years of first dialysis or KT, Charlson comorbidity index, and congestive heart failure showed no difference. The hazard ratio of cardiovascular mortality, stroke, and coronary revascularization were 0.12 (95% CI, 0.04-0.39), 0.32 (95% CI, 0.18-0.54), and 0.54 (95% CI, 0.38-0.78).

**Conclusions:** KT rather than maintenance dialysis is beneficial in reducing the all-cause mortality and the incidence of MACE among ESRDcAMI.

Kaplan-Meier curve analyses for cumulative incidence of each outcome. a. all-cause mortality, b. MACE, c. cardiovascular mortality, d recurrent AMI, e stroke, and f coronary revascularization. MACE means the composite outcome of cardiovascular mortality, non-fatal AMI and stroke.