

## Procedural volume and outcome with radial or femoral access for percutaneous coronary intervention

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**Background:** Radial and femoral arteries are usual routes for percutaneous coronary intervention (PCI). Radial access has lower major adverse cardiovascular and cerebrovascular events (MACCE) than femoral access in patients with acute myocardial infarction (AMI) because radial access for PCI can reduce vascular bleeding. However, in the previous studies, femoral access in high volume radial PCI centers showed increased trend of MACCEs. Therefore, we aimed to investigate the associations between procedural volume and outcome with radial or femoral access for PCI in patients with ST-segment elevation myocardial infarction (STEMI) in real world practice. **Methods:** We examined 5,921 STEMI patients who underwent primary PCI through radial or femoral access from the Korean Acute Myocardial Infarction Registry (KAMIR) – National Institute of Health (NIH) database. MACCEs were defined as in-hospital death, major bleeding, and cerebrovascular accidents. Radial dedicated center was defined as over 50% of radial access when PCI was performed. This research was supported by a fund by Research of Korea Centers for Disease Control and Prevention. **Results:** Femoral access has worse outcome than radial access because of radial dedicated centers. Compared with femoral dedicated center, radial dedicated center increased in-hospital MACCEs (10.9% versus 7.6%,  $p=0.032$ ) when femoral access was used. Therefore femoral access in radial dedicated center made worse outcome. The difference was mainly driven by in-hospital death (10.0% versus 5.0%,  $p<0.001$ ). There were no significant differences in major bleeding (2.1% versus 2.7%,  $p=0.462$ ) and cerebrovascular accidents (0.6% versus 0.7%,  $p=0.765$ ). Whereas, there was no difference between radial dedicated center and femoral center when radial access was used (2.6% versus 3.1%,  $p=0.558$ ). **Conclusion:** In patients with STEMI, femoral access in a radial dedicated center increased In-hospital event. However, radial access showed no significant difference in terms of MACCEs between radial and femoral centers.

## Microalbuminuria in non-diabetes could predict cardiac adverse event

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**Purpose:** Microalbuminuria has been believed to relate to the cardiac adverse event in diabetes. However, it has been unknown the relation between microalbuminuria and cardiac adverse event in non-diabetes. The aim of this study accesses to relation between microalbuminuria and cardiac adverse event in non-diabetes. **Methods:** The study was a retrospective analysis of the findings in the 968 consecutive patients at our outpatient clinic between 2012 and 2014. Normoalbuminuria was defined as urine albumin-creatinine ratio (UACR)  $<30$  mg/g and microalbuminuria was defined as  $30 \text{ mg/g} \leq \text{UACR} < 300 \text{ mg/g}$ . The patients was excluded diabetes and overt albuminuria defined as  $\text{UACR} > 300 \text{ mg/g}$ . Patients were divided into 2 groups according to UACR; normoalbuminuria ( $n=660$ , 68%) and microalbuminuria ( $n=308$ , 32%). All patients were followed for  $36 \pm 14$  months. The primary endpoints were cardiac adverse events, defined as cardiac death, nonfatal myocardial infarction, and revascularization or hospitalization. **Result:** The patients were 464 men and 504 women (48:52%) with mean age of 57 years (normoalbuminuria: 57years, microalbuminuria: 57years) and mean UACR is  $18.6 \pm 26.3 \text{ mg/g}$  (normoalbuminuria:  $8.5 \pm 4.7 \text{ mg/g}$ , microalbuminuria:  $50.7 \pm 38.3 \text{ mg/g}$ ). There were no difference of clinical characteristics, incidence of hypertension and prior cardiovascular history and medication history including aspirin, angiotensin converting enzyme inhibitor (ACE inhibitor) and statin between normoalbuminuria and microalbuminuria. Cardiac adverse events were revascularization or hospitalization without cardiac death and nonfatal myocardial infarction. ( $n=29$ , 3.0%) In univariate analysis, microalbuminuria was predictor of cardiac events (normoalbuminuria vs microalbuminuria: 2.3% vs 5.4%, HR: 2.5, 95% CI: 1.1-5.3,  $p=0.024$ ). In multivariate analysis after adjustment of age, sex, body mass index, hypertension, medication and ejection fraction, microalbuminuria was the independent predictor of cardiac events (HR: 2.6, 95% CI: 1.1-6.2,  $p=0.003$ ). **Conclusion:** Microalbuminuria estimated UACR in non-diabetes might be significantly independent predictor of cardiac adverse event.