

**TCT-253****Impact of chronic kidney disease on in-hospital outcomes in patients with acute myocardial infarction: Insights from the J-MINUET study**

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**BACKGROUND** Patients with chronic kidney disease (CKD) have a higher risk of cardiovascular disease than those without it. Limited studies, however, have addressed an impact of CKD on clinical outcomes in a large cohort of patients with acute myocardial infarction (AMI) defined as elevated cardiac troponin.

**METHODS** A total of 3,281 patients presenting with AMI were enrolled in the J-MINUET study, which is a prospective, multicenter registry in Japan (UMIN000010037). AMI was diagnosed based on the latest universal definition. CKD stage on admission was classified into 3 groups (stages 1 or 2, eGFR  $\geq 60$  mL/min/1.73m<sup>2</sup>; stage 3, 60 > eGFR  $\geq 30$  mL/min/1.73m<sup>2</sup>; and stages 4 or 5, eGFR < 30 mL/min/1.73m<sup>2</sup>). We assessed odds ratio (OR) of CKD stages having in-hospital mortality or major adverse cardiac event (MACE) defined as a composite of all-cause death, cardiac failure, fatal arrhythmia and major bleeding during hospitalization. To assess the performance of CKD stages in predicting in-hospital mortality or MACE, C-index and net reclassification improvement (NRI) were also calculated.

**RESULTS** Median age was 69 (61-78) years and 75.2% of patients were male. Of the 3,281 patients, 1,878 had CKD stages 1 or 2, 1,073 had CKD stage 3 and the remaining 330 had CKD stages 4 or 5. While in-hospital mortality significantly increased from 2.0% in CKD stages 1 or 2 through 9.6% in CKD stage 3 to 21.5% in CKD stages 4 or 5 (p < 0.0001), MACE also significantly increased from 6.8% in CKD stages 1 or 2 through 4.8% in CKD stage 3 to 39.5% in CKD stages 4 or 5 (p < 0.0001). Crude and adjusted OR for in-hospital mortality were 5.14 (3.54-7.60) and 2.00 (1.23-3.28) in CKD stage 3, and 13.3 (8.82-20.3) and 6.71 (3.91-11.7) in CKD stage 4 or 5 as compared to CKD stages 1 or 2. Crude and adjusted OR for in-hospital MACE were 3.73 (3.05-4.57) and 1.67 (1.29-2.18) in CKD stage 3, and 5.98 (4.56-7.82) and 2.82 (1.96-4.02) in CKD stage 4 or 5 as compared to CKD stages 1 or 2. C-index of basic model was 0.877 (0.849-0.904) and significantly gained up to 0.890 (0.862-0.919) when adding CKD stage to this model in predicting in-hospital mortality (p = 0.04; NRI 0.627, p < 0.0001). Similarly, C-index of basic model was 0.820 (0.798-0.842) and significantly gained up to 0.830 (0.808-0.851) when adding CKD stage to this model in predicting in-hospital MACE (p = 0.011; NRI 0.306, p < 0.0001).

**CONCLUSIONS** Our results indicated that the presence of CKD was independently associated with in-hospital mortality and MACE in patients with AMI. Evaluation of CKD stage would be useful to predict in-hospital mortality and MACE in AMI.

**CATEGORIES CORONARY:** Acute Myocardial Infarction

**KEYWORDS** Acute coronary syndromes, Acute myocardial infarction, Chronic kidney disease

**TCT-254****Utility of A Simplified Risk Tool To Predicts Long-Term Mortality in ST-elevation Myocardial Infarction**

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**BACKGROUND** The utility of currently validated risk prediction models of ST-elevation myocardial infarction (STEMI) is limited by their complexity. We aimed to evaluate a simplified risk tool to identify high and low-risk STEMI patients and assess the impact of door-to-balloon-times (DTBT) on their long-term mortality.

**METHODS** We analyzed baseline clinical and procedural characteristics of 2,539 consecutive STEMI patients who underwent primary percutaneous coronary intervention (PCI) from the Melbourne Interventional Group registry from 2004-2011. Patients were classified high risk (HR-STEMI) if they presented with cardiogenic shock, out of hospital cardiac arrest (OHCA) or Killip class  $\geq 2$ ; or low-risk (LR-STEMI) if there were no high-risk features. We further stratified patients by DTBT ( $\leq 90$  minutes vs.  $> 90$  minutes) and determined the long-term mortality in high and low risk patients stratified by DTBT.

**RESULTS** Of the 2,539 patients, 395 (16%) met the high-risk criteria. A DTBT  $\leq 90$  minutes was achieved in 43% of HR-STEMI patients and in 55% of LR-STEMI patients. Patients in the HR-STEMI compared to LR-STEMI cohort had higher in-hospital (31% vs. 1%, p < 0.01) and long-term mortality (37% vs. 7%, p < 0.01). A DTBT  $\leq 90$  minutes was associated with significant improvements in short and long-term mortality in both groups. A DTBT  $\leq 90$  minutes was an independent multivariate predictor of long-term survival in LR-STEMI (hazard ratio [HR] 0.5, 95% confidence interval [CI] 0.3-0.9, p = 0.02) but not in HR-STEMI (HR 0.7, 95% CI 0.5-1.1, p = 0.11).

**CONCLUSIONS** A simplified clinical tool incorporating cardiogenic shock, OHCA or Killip class  $\geq 2$  clearly identifies a cohort with significantly worse prognosis. Timely reperfusion is associated with improved outcomes in both cohorts. Paradoxically, achieving a DTBT  $\leq 90$  minutes appears to be prognostically more important in LR-STEMI patients.

**CATEGORIES CORONARY:** Acute Myocardial Infarction

**KEYWORDS** Cardiogenic shock, Door-to-balloon time, Percutaneous coronary intervention, primary

**TCT-255****A Meta-analysis of 43,432 patients: Concomitant Use of Proton pump inhibitor With Clopidogrel is Associated with Increased Death and Myocardial infarction in patients receiving percutaneous coronary intervention**

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**BACKGROUND** Concomitant use of proton pump-inhibitor (PPI) with clopidogrel has been reported to be associated with increased risk of mortality and myocardial infarction in patients receiving coronary intervention due to drug interaction. There is little data in large populations.

**METHODS** We have conducted a meta-analysis of published and unpublished studies including patients with acute coronary syndrome or stable angina receiving coronary stenting discharged on clopidogrel. Data source was MEDLINE(ovid), PubMed, Web of Science, Cochrane Central Register of Controlled Trials and Science Direct from 1950 to November 2009 with English language. Using standardized protocol, 2 reviewed serially abstracted data from each study.

**RESULTS** Four published and 3 unpublished studies with information on 43432 patients and 7354 events were included. Common primary outcomes were death including cardiovascular cause, myocardial infarction, stroke. The pooled odd ratio (OR) was 1.56 (95% CI 1.28-1.89), with significant heterogeneity across studies (I<sup>2</sup>=86.3%, p < 0.001). This heterogeneity was due to the different estimation between published and unpublished studies: OR, 1.39(CI, 1.04-1.87) and 2.19 (CI, 1.25-3.83), respectively.