

Impacts of gender on clinical outcome after percutaneous coronary intervention

¹울산대학교 의과대학 울산대학교병원 내과학교실, ²울산대학교 의과대학 울산대학교병원 심장내과, ³가천대학교 응용통계학과, ⁴가톨릭대학교 대전성모병원 심장내과, ⁵울산대학교 의과대학 아산병원 심장내과

*이권휘¹, 안서희², 한승봉³, 양유진⁵, 김용균², 원기범², 김신재², 이상곤², 김대원⁴, 박만원⁴, 허성호⁴, 박경민²

Background/Aims: We sought to investigate the gender impact on clinical outcome of patients undergoing concurrent percutaneous coronary intervention using claims data of the National Health Insurance in Korea. **Methods:** Among 191,926 patients who underwent PCI from July 2011 to June 2015, 81,115 patients with the first episode of coronary artery disease were classified either as angina ($n=49,228$) or acute myocardial infarction (AMI, $n=31,887$). A propensity-score matching method was used to identify gender impacts on mortality of in-hospital and post-discharge. **Results:** The proportion of women was 30.3% and women were older than men (71.0 ± 10.3 versus 61.5 ± 11.8 years old, $p<0.001$). The Charlson comorbidity index was significantly higher than men (1.54 ± 1.42 versus 1.10 ± 1.32 , $p<0.001$) because most of comorbidities including diabetes, hyperlipidemia, hypertension, congestive heart failure, peripheral vascular disease, cerebrovascular disease and renal disease were more frequent in women. After propensity-score matching, women's in-hospital mortality was not significantly different in patients with angina (15,212 pairs, hazard ratio (HR), 1.19; 95% Confidence Interval (CI): 0.99–1.44; $p=0.061$) and AMI (7,241 pairs, HR, 1.08; 95% CI: 0.95–1.24, $p=0.249$). During median follow up of 2.2 years (interquartile range, 1.2–3.2), women's mortality was even lower in angina (HR, 0.83; 95% CI: 0.76–0.90, $p<0.001$) and AMI (HR, 0.90; 95% CI: 0.82–0.98, $p=0.020$). **Conclusions:** Women's post-discharge mortality is lower than men under the contemporary PCI treatment in nationwide cohort. Altered gender impact on clinical outcome might be attributed to improved medical and procedural strategies.

Figure 1

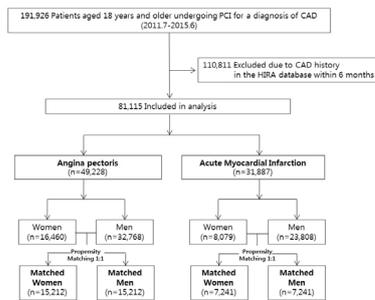


Figure 1. Overview of the study population. PCI = percutaneous coronary intervention; CAD = coronary artery disease; HIRA = Health Insurance Review & assessment Service

Figure 2

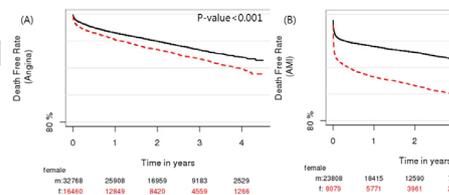


Figure 2. Kaplan-Meier curves for all-cause death. Shown is the cumulative incidence rates for all-cause death in angina (A) acute myocardial infarction (AMI) between genders, respectively. The numbers in each figure represents the cumulative incidence rates at each time point. AMI = acute myocardial infarction