

CRT-100.22**Outcomes of Percutaneous Coronary Intervention in Patients with Atrial Fibrillation Presenting With Acute Myocardial Infarction**

Madhan Shanmugasundaram,¹ Mehrtash Hashemzadeh,² Mohammad-Reza Movahed¹

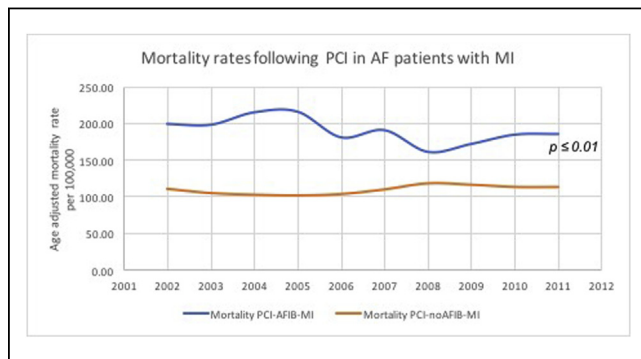
¹University of Arizona College of Medicine/Southern Arizona VA Health Care System, Tucson, AZ; ²VA Long Beach Health Care System, Long Beach, CA

BACKGROUND Atrial fibrillation (AF) is common in patients presenting with myocardial infarction (MI). Percutaneous coronary intervention (PCI) has been shown to improve cardiovascular outcomes in MI. However, outcomes of PCI in AF patients presenting with MI remain largely unknown.

METHODS We analyzed the Nationwide Inpatient Sample (NIS) database to calculate the age-adjusted mortality rate for PCI in AF patients presenting with MI between 2002 and 2011, in adults over 40 years of age. This was then compared to the mortality rate for PCI in non-AF patients with MI. Specific ICD-9-CM codes were used to identify patients and outcomes.

RESULTS Of 3,226,405 PCIs done during the study period, 472,609 (14.6%) PCIs were done on AF patients, of which 137,870 PCIs were for MI. About 60% of these patients were male. Patients with AF were older (71.3±10.6 years). Overall, the number of PCIs showed a declining trend from 2002 to 2011, but for MI patients, the number of PCIs appeared stable over the years. The age-adjusted in-hospital mortality following PCI in MI was significantly higher in AF group compared to the non-AF group (190.24±17.21 vs. 109.08±5.89 per 100,000; $p<0.01$). These results are summarized in Figure 1. This trend was seen during the entire study period. The age-adjusted in-hospital mortality following PCI for stable coronary artery disease (CAD) was also significantly higher in AF group compared to non-AF group (65.18±9.82 vs. 29.24±6.67 per 100,000; $p<0.01$).

CONCLUSIONS AF is prevalent in MI patients undergoing PCI. AF is associated with increased mortality following PCI for acute MI. AF is not a benign arrhythmia in MI patients, and close attention is warranted in these patients to improve mortality.

**CRT-100.23****The Effect of Index Admission Revascularization on Readmission Over Time After Myocardial Infarction**

Michael Johnson, Newton Wiggins, Andrew Toth, Jeevanantham Rajeswaran, Samir Kapadia, Venu Menon, Stephen Ellis, Umesh Khot
Cleveland Clinic, Cleveland, OH

INTRODUCTION Readmission after myocardial infarction (MI) is a publicly reported quality metric. Readmission rates, however, are calculated independent of the treatment received while admitted for MI. We sought to evaluate the effect of revascularization on the risk of readmission after MI over time.

METHODS Patients who were discharged with a principal diagnosis of MI from January 2010 to January 2017 were retrospectively identified

using our institutional billing system. Patients were separated by revascularization strategy during the index admission: percutaneous coronary intervention (PCI), coronary artery bypass grafting (CABG) and medical management. Readmission for any cause within 90 days of discharge was the primary endpoint. We calculated the instantaneous risk of readmission by revascularization strategy using a multiphase hazard model.

RESULTS Six thousand three hundred ninety-two patients were admitted 6693 times for a principal diagnosis of MI. One thousand four hundred twenty-nine patients were readmitted within 90 days for a total of 2137 readmissions. Of those readmitted, 224 underwent CABG, 633 received PCI, and 607 were medically managed. Six hundred seventy-seven (32%) of the readmissions occurred within 2 weeks of discharge. The risk of readmission is highest for all groups immediately after discharge, and this risk remained highest for those patients who received medical management throughout the follow-up period ($p<0.0001$) (Figure 1).

CONCLUSIONS Following an index MI, patients are most vulnerable for readmission immediately after discharge, and patients who are not revascularized represent the highest-risk group. Identifying why patients were not candidates for revascularization during the index admission, such as prohibitive comorbid risk, anatomy not suitable for revascularization or planned staged revascularization, may help explain their increased risk for readmission.

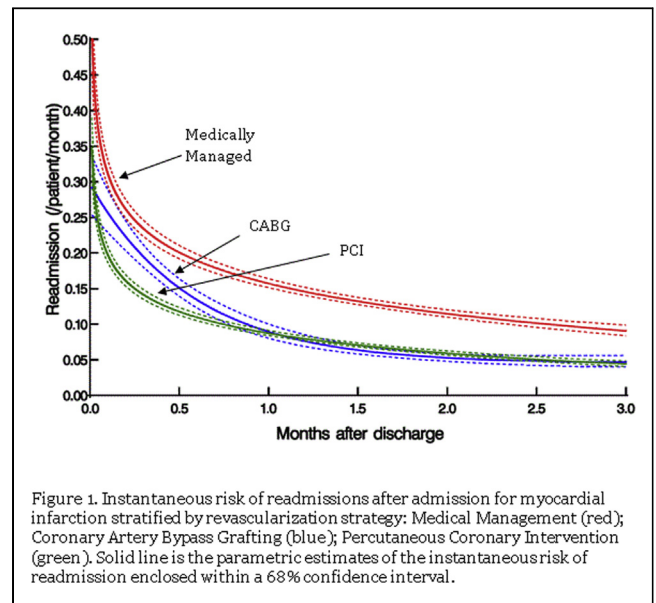


Figure 1. Instantaneous risk of readmissions after admission for myocardial infarction stratified by revascularization strategy: Medical Management (red); Coronary Artery Bypass Grafting (blue); Percutaneous Coronary Intervention (green). Solid line is the parametric estimates of the instantaneous risk of readmission enclosed within a 68% confidence interval.

CRT-100.24**Acute Myocardial Infarction in Patients with Paraplegia: Percutaneous Coronary Intervention or Coronary Artery Bypass Grafting?**

Xuming Dai,¹ Susan Feng Lu,² Lauren Xiaoyuan Lu,³ Sidney C. Smith, Jr.¹

¹Division of Cardiology, University of North Carolina at Chapel Hill, Chapel Hill, NC; ²Krannert School of Management, Purdue University, West Lafayette, IN; ³Kenan-Flagler Business School, University of North Carolina at Chapel Hill, Chapel Hill, NC

BACKGROUND Cardiovascular disease has become a leading cause of death for individuals with paraplegia. This is the first clinical study in the literature to investigate the clinical outcomes and treatment of AMI patients with paraplegia.

METHODS We identified AMI patients with paraplegia cohort by using principal diagnosis of AMI (ICD-9 codes 401.xx) and a concomitant diagnosis of paraplegia (344.1) and/or quadriplegia/tetraplegia (344.0) in New York State Inpatient Database (NY-SID) from 2007 to 2013.