

Young women at greater risk for adverse outcomes following PCI

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Women younger than 55 years of age who undergo percutaneous coronary intervention (PCI) for acute coronary syndrome (ACS) are more likely to experience one-year adverse cardiovascular events due to risk factors such as diabetes and chronic kidney disease, yet they are less likely to receive potent antiplatelet therapy than men. The PROMETHEUS study found that outcomes for both men and women post-PCI are dependent on their baseline risk factors, not their sex. The results were presented today as a late-breaking clinical trial at the Society for Cardiovascular Angiography and Interventions (SCAI) 2016 Scientific Sessions in Orlando, Fla.

PROMETHEUS was a retrospective, multicenter observational study comparing outcomes in patients treated with clopidogrel versus those who were treated with the more potent therapy, prasugrel, following ACS PCI. The study looked at outcomes up to one year and tracked major adverse cardiac events (MACE) and [bleeding](#) risks. MACE was defined as a composite of death, myocardial infarction, stroke or unplanned revascularization at one year. Clinically significant bleeding was defined as bleeding that required a transfusion or hospitalization.

"Taking into account all [risk factors](#), we wanted to find out if there was a difference in treatment between men and women," said study co-principal investigator Usman Baber, MD MS, and post-doctoral research fellow Jaya Chandrasekhar, MBBS, MRCP, FRACP from the Icahn School of Medicine at Mount Sinai.

The study cohort included a total of 4,851 patients. Of those, 1,162 (24.0 percent) were women and 3,689 (76.0 percent) were men. The prevalence of diabetes (41.0 percent vs. 27.9 percent) and [chronic kidney disease](#) (12.7 percent vs. 7.2 percent) was higher among women than men.

Irrespective of sex, prasugrel was used in less than one-third of patients (31.8 percent in men vs. 28.1 percent in women, $p=0.01$). Unadjusted, MACE at one year was significantly higher in women than in men (21.1 percent vs. 16.2 percent). After multivariable adjustment (HR 1.13, 95 percent CI 0.93-1.36), results were no longer significant. Women also had more bleeding than men (3.6 percent vs. 2.2 percent, $p=0.01$), without differences in adjusted risk (HR 1.23, 95 percent CI 0.78-1.95).

"What this study demonstrated is that it is important to objectively assess all the risk factors when considering which therapy to administer," said the authors. "In the real world physicians are more likely to consider thrombotic risk in men but bleeding risk in [women](#) for prescription of prasugrel or clopidogrel."

Dr. Baber and Dr. Chandrasekhar reported no disclosures.

More information: Dr. Baber presented "Sex-based Differences in Patients &IE 55 Years of Age Undergoing PCI for Acute Coronary Symptoms" on Friday, May 6, 2016 at 9:15 a.m. ET.

For more information about the SCAI 2016 Scientific Sessions, visit <http://www.SCAI.org/SCAI2016>.

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