

Relevance of gender in patients with acute myocardial infarction undergoing coronary interventions

Ortolani P, Solinas E, Guastaroba P, Marino M, Casella G, Manari A, Piovaccari G, Ottani F, Varani E, Campo G, Marzocchi A, Merlini PA, Caminiti C, De Palma R, Ardissino D.

AIMS

To evaluate whether gender differences in terms of up to 4-year outcome still persist within patients with acute myocardial infarction (AMI) who uniformly underwent coronary revascularization, we performed a gender comparison in a large contemporary multicentre percutaneous intervention (PCI) registry.

MATERIALS AND METHODS

We retrospectively analyzed data from 18,351 patients with AMI, who underwent percutaneous coronary interventions (5093 women and 13,258 men) in the Emilia Romagna region of Italy between July 2002 and December 2007. Median follow-up was 1174 days.

RESULTS

After propensity score adjustment, differences in gender-related mortality were not temporarily homogeneous: 30-day adjusted mortality was higher in women than in men [hazard ratio (HR): 1.40, $P < 0.0001$], whereas thereafter female gender showed a significantly lower mortality risk (HR: 0.84, $P = 0.01$). Notably, younger women (<50 years old) both in the acute and postacute period had more than 3.6 higher risk of mortality when compared with men, whereas older women, particularly after the first 30-day post AMI, had similar (50-80 years old) or even better (≥ 80 years old) survival compared with men. Finally 1-month adjusted risk of heart failure and post PCI vascular complications requiring surgical treatment was higher in women while there was no detectable difference in terms of early and late AMI/unstable angina, stroke and angiographic stent thrombosis.

CONCLUSION

In a contemporary large real-world AMI population treated with PCI, we found gender-related temporal and age-dependent adjusted differences in mortality. Our data suggest the hypothesis that biological gender-related differences could, in part, explain these findings.