

Impact of gender on the long-term prognosis in acute STEMI patients undergoing primary percutaneous coronary intervention: analysis of 10-year all-comers registry

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Background: Published data about the impact of female gender on the long-term prognosis in patients with ST-elevation -myocardial infarction (STEMI) undergoing primary percutaneous coronary intervention (pPCI) have been incoherent. Much of the registries show that the gender effect diminishes after control for age and comorbidities

Purpose: We sought to investigate the gender dependent impact on the long-term prognosis in STEMI patients undergoing pPCI.

Methods: This prospective cohort study included 1965 consecutive patients with STEMI who underwent primary-PCI between January 2008 and December 2017. Our primary objective was to assess its impact of gender in all-cause mortality and major adverse cardiovascular events (MACE; death, recurrent MI, target vessel revascularization, heart failure) during follow-up.

Follow-up was performed through consultation of the electronic registries available in the autonomic community of Galicia (IANUS program); all medical evaluations and hospital registries were reviewed. Median follow-up was 3 years (interquartile range of 0.68–4.67 years).

Results: Of the 1965 patients with STEMI admitted for primary PCI, 464 (23,6%) were female. Women were on average 10 years older than men (71.5±13 vs. 61.5±12 yrs, p=0,000), with a higher prevalence of diabetes (25,2% vs 20,5% p=0,030) and hypertension (65,1% vs 44,5% p=0,000). With regard to system delays, the median time from first medical contact to

pPCI were superior in women (116,3±83) than men (97,9±67) (p=0,000). Despite their older age women did not show differences in the extent of coronary disease (median SYNTAX score 13,60±8.0 vs. 14.33±8.7 in men, p=0,122). The GRACE score was higher for women (141.1±39 vs 120.8±35 p=0.07) and the incidence of cardiogenic shock at admission was 10.2% (7.1% in men, p=0,003). Furthermore, female patients received less guideline-directed medical therapy than men with less prescription of statins (93.6.5% vs 96.9%; p=0,003), and beta blockers (80.2% vs 85.1%; p=0.021), and having less radial access for pPCI (84.1% vs 90.1%; p=0.000).

The cumulative incidence of all-cause mortality was 19.4% vs 12.6% (p=0,000), the incidence of MACE was 31.9% vs 23.4% (p=0.000) for women and men respectively (Image 1). Multivariate analysis revealed that, after correction for baseline differences, gender remained an independent predictor for all-cause mortality (HR IC 95%: 1.922 (1.396–2.696) p=0.000)

Conclusions: In our "real-world" registry of patients with STEMI undergoing pPCI women had longer ischemic times, higher risk profiles, and differing interventional approaches compared with men and gender results an independent predictor for all-cause mortality. Dedicated studies of specific mechanisms underlying this female disadvantage are mandatory to reduce this gender gap.

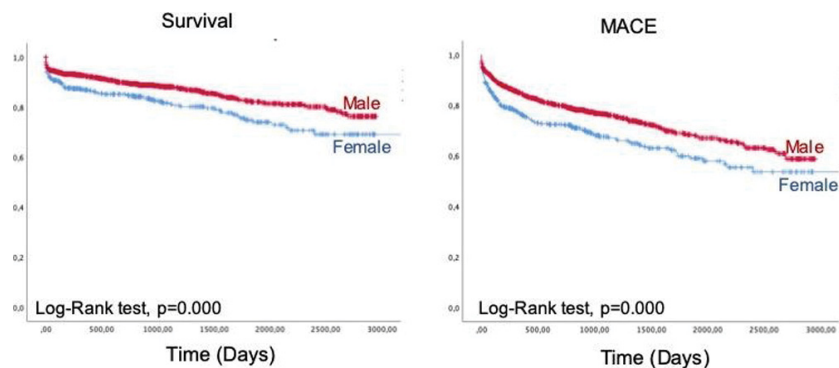


Image 1