



### Press release relating to an ESC press conference

*This press release accompanies both a presentation and an ESC press conference at ESC Congress 2017. It does not necessarily reflect the opinion of the European Society of Cardiology.*

**EMBARGO**

**26 August 2017 at 13:30 CEST**

**Title:** Gender gap in death from heart attack reduces particularly in younger women

**Barcelona, Spain – 26 Aug 2017:** The gender gap in death from heart attack has reduced over the past two decades particularly in younger women, according to research presented today at ESC Congress.<sup>1</sup> The study in over 50 000 patients found that overall in-hospital mortality for heart attack patients was halved during the 20 year period.

“Research in the 1990s showed that younger women with acute myocardial infarction had a higher mortality than men of similar age,” said Dr Dragana Radovanovic, head of the AMIS Plus Data Centre, University of Zurich, Switzerland. “Little is known about whether this gender difference has persisted over the years.”

This study assessed changes in the in-hospital mortality of men and women with acute myocardial infarction over a 20 year period. The researchers retrospectively analysed prospective data collected from January 1997 through December 2016 in the Swiss nationwide acute myocardial infarction registry AMIS Plus.

The study included 51 725 acute myocardial infarction patients from 83 Swiss hospitals. Among them, 30 398 (59%) presented with ST-segment elevation myocardial infarction (STEMI) and 21 327 (41%) with non-ST-segment elevation myocardial infarction (NSTEMI). The study population was 73% male (mean age 64 years) and 27% female (mean age 72 years). The mean age did not change for either sex during the observation period.

The researchers found a decrease in crude in-hospital mortality from 1997 to 2016. In STEMI patients, in-hospital mortality significantly dropped from 9.8% to 5.5% in men and from 18.3% to 6.9% in women ( $p < 0.001$  for both). In NSTEMI patients it fell from 7.1% to 2.1% in men and 11.0% to 3.6% in women ( $p < 0.001$  for both).

Dr Radovanovic said: “The data shows that in-hospital mortality of patients with acute myocardial infarction fell by at least half over the 20 year period. The differences in death rates between men and women also reduced.”

As previous research had shown that younger women with acute myocardial infarction had a higher mortality than men of similar age, the researchers also separately analysed mortality in patients younger than 60 years of age. In women they found 6% and 13% decreases in mortality with each subsequent admission year for STEMI and NSTEMI, respectively. No significant decreases were observed in men less than 60 years of age.

Dr Radovanovic said: “Although in-hospital mortality continues to be higher in women than men, overall age-adjusted mortality has decreased more prominently in women compared to men, particularly those in the age category below 60 years.”

Between 1997 and 2016 the use of reperfusion to open blocked arteries, especially percutaneous coronary intervention (PCI), increased in all patients admitted for acute myocardial infarction. In STEMI patients, use of PCI increased from 60% to 93% in men and 45% to 90% in women.

Dr Radovanovic said: “Women still have higher in-hospital mortality from acute myocardial infarction than men, probably because they are eight years older when they have a heart attack, and they have more cardiovascular risk factors and comorbidities. However, the gender gap in mortality has narrowed over the past 20 years which may be due to increasing use of PCI in women.”

ENDS

#### To reduce the burden of cardiovascular disease

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### Notes to editors

**SOURCES OF FUNDING:** The AMIS Plus registry is funded by unrestricted grants from the Swiss Heart Foundation and from Abbot AG, AstraZeneca AG, Bayer (Schweiz) AG, B. Braun Medical AG, Biotronik AG, Cordis-Cardinal Health, Medtronic AG, Mepha Pharma AG, Merck Sharp & Dohme-Chibret AG, Novartis Pharma Schweiz AG, Servier (Suisse) AG, Vascular Medical AG; all in Switzerland. The sponsors did not play any role in the design, data collection, analysis, or interpretation of the registry.

**DISCLOSURES:** None.

### References and notes

<sup>1</sup>The abstract “Gender differences in the decrease of in-hospital mortality in patients with acute myocardial infarction during the last 20 years in Switzerland” will be presented during:

- [Acute coronary syndrome: risk scores and sub-populations](#) on Saturday 26 August from 13:30 to 15:00 in Agora 1.
- The press conference - Cardiac interventions - expanding applications on Saturday 26 August from 15:00 to 16:00.

### [About the European Society of Cardiology](#)

The European Society of Cardiology brings together health care professionals from more than 140 countries, working to advance cardiovascular medicine and help people lead longer, healthier lives.

### [About ESC Congress 2017](#)

ESC Congress is the world’s largest and most influential cardiovascular event contributing to global awareness of the latest clinical trials and breakthrough discoveries. ESC Congress 2017 takes place 26 to 30 August at the Fira Gran Via in Barcelona, Spain. The scientific programme is [here](#). More information is available from the ESC Press Office at [press@escardio.org](mailto:press@escardio.org).

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