Women more likely to die from myocardial infarction than men

Gender gap in mortality is independent of patient characteristics, revascularisation delays and revascularisation modalities

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Doctors need to be more careful in the management of STEMI in women to further reduce ischemic time. This means adopting more aggressive reperfusion strategies and treating women the same as men. These actions by patients and doctors will reduce the current gender gap in mortality

Istanbul, Turkey – 20 October 2012: Women are more likely to die from a myocardial infarction than men, according to research presented at the Acute Cardiac Care Congress 2012. The gender gap in mortality was independent of patient characteristics, revascularisation delays and revascularisation modalities. Women also had longer treatment delays, less aggressive treatment, more complications and longer hospital stays. The study was presented by Dr Guillaume Leurent from the Centre Hospitalier Universitaire in Rennes, France.

The Acute Cardiac Care Congress 2012 is the first annual meeting of the newly launched Acute Cardiovascular Care Association (ACCA) of the European Society of Cardiology (ESC). It takes place during 20-22 October in Istanbul, Turkey, at the Istanbul Lufti Kirdar Convention and Exhibition Centre (ICEC).

“Previous studies on ST elevation myocardial infarction (STEMI) have shown that women have a worse prognosis, possibly due to longer management delays and less aggressive reperfusion strategies,” said Dr Leurent. “Therefore we used data from ORBI, a prospective registry of 5,000 STEMI patients, to find out whether there were any gender differences in the management of STEMI.”

The ORBI registry (Observatoire Régional Breton sur l’Infarctus du myocarde; Brittany regional observational study on myocardial infarction) has been ongoing since July 2006, and consists of STEMI patients admitted within 24 hours of symptom onset to the 9 interventional cardiology units in the Brittany region of France. The registry aims to assess the quality of management of acute myocardial infarction.

STEMI patients are included into the ORBI registry during the pre-hospital or hospital phase. The diagnosis is made by an emergency physician (in the ambulance or emergency room) or by the interventional cardiologist. Patients are excluded from the registry when the diagnosis of STEMI in the ambulance or emergency room is not confirmed by the interventional cardiologist – this happens in just 1% of cases.

For the current study, the researchers analysed data from 5,000 patients included in the ORBI registry over a 6-year period. They found that 1,174 patients (23.5%) were women. Women STEMI patients were older, with an average age of 69 years compared to 61 years for men ($p<0.0001$). Women had more frequent hypertension, less dyslipidemia and less current smoking.

The researchers found significant differences in the management and outcome of STEMI patients according to gender.

Women had longer median delays between symptom onset and call for medical assistance (60 vs 44 minutes, $p<0.0001$) and between admission and reperfusion (45 vs 40 minutes, $p=0.011$).

“Delays of management are significantly longer in women, hence they have a longer ischemic time during which the heart’s blood supply is reduced,” said Dr Leurent. “And reperfusion strategies to restore blood flow are significantly less aggressive – with less fibrinolysis, and fewer coronary angiographies performed.”

Intra-hospital mortality was higher in women (9.0% vs 4.0%, p<0.0001). The researchers used 3 adjustment models to determine whether the higher intra-hospital mortality among women was solely due to gender or whether it was due to other factors such as patient characteristics (age, hypertension, smoking, etc) or management.

Dr Leurent said:

“This higher intra-hospital mortality among women significantly persists when adjusted for patient characteristics, for revascularisation delays (onset of symptoms to reperfusion therapy) and for revascularisation modalities.”

Women had more STEMI complications including atrial fibrillation (7% vs 3%, p<0.0001) and longer hospital stays (7.6+4 vs 6.7+4 days, p<0.0001).

Women received significantly less of the recommended treatments at discharge. Specifically, they received less antiplatelet agents, beta blockers, ACE inhibitors and statins. They also received less cardiovascular rehabilitation (27% of women vs 47% of men, p<0.0001).

Dr Leurent said:

“These results suggest that women need to be more vigilant about chest pains and request medical help quickly to reduce ischemic time.”

He added:

“Women may take longer to call an ambulance when they have chest pains because they don’t believe it can be a myocardial infarction. Most women believe myocardial infarction is a male problem.”

“Many doctors still think myocardial infarction is a male problem,” continued Dr Leurent. “Campaigns are needed to increase awareness in doctors and the public about the problem of STEMI in women.”

He concluded:

“Doctors need to be more careful in the management of STEMI in women to further reduce ischemic time. This means adopting more aggressive reperfusion strategies and treating women the same as men. These actions by patients and doctors will reduce the current gender gap in mortality.”

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Notes to editor

About the European Society of Cardiology (ESC)
The European Society of Cardiology (ESC) represents more than 75,000 cardiology professionals across Europe and the Mediterranean. Its mission is to reduce the burden of cardiovascular disease in Europe.

About the Acute Cardiovascular Care Association (ACCA)
The Acute Cardiovascular Care Association (ACCA) is a registered branch of the ESC, representing over 1,300 health professionals. ACCA aims at improving the quality of care and outcomes of patients with acute cardiovascular diseases through state of the art education and training on the best

strategies of treatment and by influencing and advising healthcare professionals, scientists, decision-makers, policy-makers, the media, and allied societies in acute cardiovascular care.

Information for journalists attending Acute Cardiac Care 2012

The Acute Cardiac Care Congress 2012 takes place during 20-22 October in Istanbul, Turkey, at the Istanbul Lufti Kirdar Convention and Exhibition Centre (ICEC). The full scientific programme is available here

Registration is possible onsite, with a valid press card, assignment letter or three bylined articles and signed Embargo form.

A press working area will be available in room Barbaros 1, Level -1. There will be no press conference, but a press kit will be available and a press coordinator onsite will assist the media with any ACCA spokespersons enquiries.

References This press release relates to an Oral Abstract Session taking place in the Topkapi Lecture Room on Monday 22 October 2012 at 16h30 (local time).
Please find the session's detail and the abstract here.