PREVALENCE AND PROGNOSTIC IMPACT OF RENAL INSUFFICIENCY IN ST-ELEVATION MYOCARDIAL INFARCTION FROM A GENDER PERSPECTIVE: DATA FROM A LARGE PROSPECTIVE COHORT

Oral Contributions
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Background: Data indicate that in the case of myocardial infarction (MI) the prevalence and prognostic impact of renal insufficiency (RI) are higher in women. In the case of ST-elevation MI (STEMI), women have a higher adjusted mortality compared to men but RI has seldom been taken into account.

Methods: All STEMI patients registered in the Swedish national quality register SWEDEHEART 2003-2009 were included, 37991 patients. Based on s-creatinine on admission, the glomerular filtration rate was estimated (eGFR) according to the MDRD and Cockcroft-Gault (CG) formulas. Follow up was maximum 8 years (median 1152 days).

Results: Women had 1.6 and 2.2 times higher multivariable adjusted risk of RI (eGFR <60 mL/min), depending on if MDRD or CG was used. Half of all women had RI according to CG, 38% according to MDRD. Corresponding numbers for men were 22 and 19%. RI was associated with 2-2.5 times higher risk of in-hospital mortality and approximately 1.5 times higher risk of long-term mortality in both genders. Each 10 mL/min decline of eGFR was associated with a 22-33% increased risk of in-hospital mortality and 9-16% increased risk of long term mortality (numbers depending on used formula). There was no significant interaction between sex and eGFR regarding short or long term mortality. Both in-hospital and long term mortality were twice as high in women. After multivariable adjustments including all confounders except kidney function women had still 11% higher risk of in-hospital mortality whereas men had 7% higher risk of long term mortality. If eGFR according to any of the formulas was also included, there was no longer a gender difference regarding in-hospital mortality and women had a lower risk of long term mortality. Adjusting for eGFR according to CG alone was enough to eradicate the higher risk in women, both short and long term.

Conclusions: Among STEMI patients
1) Female sex was independently associated with RI
2) Reduced eGFR regardless of the formula used was a strong independent risk factor for mortality without a significant gender difference in prognostic impact.
3) Reduced eGFR appeared to be an important reason as to why women had twice as high mortality compared to men with STEMI.