

Are there gender differences in patients with acute coronary syndrome or is it all just a question of age?

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Background: A number of studies have reported gender differences in the diagnosis and treatment of patients with ACS. Using data from the AMIS Plus registry we examined gender differences in clinical characteristics, diagnoses, treatments and outcomes.

Methods: Patients (pts) enrolled from January 1997-December 2005 by 68 hospitals were included. Data for all patients and in various age groups (≤ 50 ; 51-60y; 61-70y; 71-80; >80 y) were analysed.

Results: Of the 19461 ACS pts, 5407 (28%) were female and 14054 (72%) male. In multivariable regression analysis gender was not a significant mortality predictor (OR 0.97; CI95% 0.78-1.21; $p=0.775$). Women were older (mean age 70.9 ± 12.1 y vs 63.4 ± 12.9 y), arriving 60 min later. Men were admitted more often with pain (82% vs 80%) and ST-elevation (57% vs 54%) but there were no significant gender differences within age groups. Men had more frequently Q waves on initial ECG (24% vs 22%) but only if aged ≤ 50 y. Women were more often admitted with dyspnea (32% vs 23%), which was significant in the 50-70y categories. Males often had a history of CAD (40% vs 38%) but only if aged >60 y. Women had more often hypertension (65% vs 51%) in all groups except ≤ 50 y, more often diabetes (24% vs 19%), without significant gender differences within age groups. Women were often in Killip class III/IV (9% vs 7%)(significant only if ≤ 50 y). Fewer females were overweight (56% vs 67%) in all age groups, had less frequent dyslipidemia (56% vs 59%) (only significant in ≤ 50 y). Fewer women smoked (25% vs 44%) with no gender difference if <60 y. Women were less likely to be given aspirin (92% vs 94%), beta-blockers (67% vs 74%) and lipid lowering drugs (63% vs 73%), all without gender differences in the age groups, clopidogrel (34% vs 43%) if aged >60 y, GPIIb/IIIa antagonists (27% vs 37%) in 71-80y. Thrombolysis was performed in 16% women and 20% men with no significant differences within age groups. 39% males underwent primary PCI versus 29% females (significant only if 50-70y). In-hospital mortality was 6.4% for men and 10.8% for women, which was significant only in pts ≤ 50 y.

Conclusion: The hypothesis of gender differences in pts admitted for ACS couldn't be definitively verified with the AMIS data. Age was the predominant factor in clinical characteristics, treatment and outcome. Nevertheless, higher mortality in young female pts (≤ 50 y) needs further investigation.