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Introduction: Few data describe temporal trends in presentation, treatment and outcome in men and women with acute ST-segment elevation myocardial infarction (STEMI).

Methods: Swiss STEMI patients enrolled in the AMIS Plus registry from 1997–2010 were analyzed using multivariate logistic regression.

Results: From 20,363 STEMI patients, 5458 were women and 14,905 men. Women were 8.6 years older, had more co-morbidities (Charlson Index 2.2 vs 1.6% vs 12.8%; P<0.001), diabetes mellitus (22.6% vs 17.3%; P<0.001) and hypertension (64.9% vs 50.6%; P<0.001) and atrial fibrillation (5.6% vs 3.9%; P<0.001). Men had more often dyslipidemia (54.1% vs 50.3%; P<0.001), resuscitation prior admission (6.3% vs 5.2%; P=0.003) and were more often current smokers (46.3% vs 29.9%; P<0.001). Women were less likely to undergo primary reperfusion (61.6% vs 75.4%; OR 0.52; 95%CI 0.49-0.58; P<0.001) even after adjusting for baseline characteristics and admission year (OR 0.80; 95%CI 0.71–0.89; P<0.001), or to receive early and discharge drugs such as thienopyridines, ACE inhibitors, AT antagonists or statins. In 1997, thrombolysis was performed in 51% of male and 39% of female patients. Now, thrombolysis is negligible. Use of primary PCI increased from below 10% in both genders in 1997 to over 70% in females and over 80% in males. Early thienopyridine therapy steadily increased to 90% of all patients in 2010. Statin use rapidly increased until 2002, peaking at 72% in women and 82% in men in 2005/6. Early statin use since decreased but thienopyridine and statin therapies at discharge increased and were prescribed to over 90% of patients in 2010. From 1997–2010, annual in-hospital mortality decreased by 5% in men (OR 0.95; 95%CI 0.94–0.97; <0.001) and 6% in women (OR 0.94; 95%CI 0.92–0.96; P<0.001). Despite higher crude in-hospital mortality, female gender was not an independent predictor of in-hospital mortality (OR 1.10; 95%CI 0.90–1.35; P=0.37).

Conclusion: Therapy of STEMI patients has changed greatly during the past 14 years in Switzerland, largely in accordance with guideline recommendations.

Circ Cardiovasc Qual Outcomes. 2012; 5: A283