

10 years of data collected in the Berlin Myocardial Infarction Registry (BMIR) - Changes in treatment and outcome for patients with acute myocardial infarction

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Background:

Over a decade of years, from 1999-2008, guidelines for treatment of patients with myocardial infarction (MI) have been regularly updated and new definitions for acute MI have been established. Aim of the present study was to investigate the changes in treatment and hospital mortality over this 10-year period in acute MI-patients under the influence of the implementation of guideline-based therapy and the redefinition of acute myocardial infarction in Berlin, Germany.

Methods:

In the BMIR, data of patients with acute myocardial infarction (AMI) have been collected prospectively since 1999. We analyzed data from 1.1.1999 - 1.4.2008 of 11 hospitals continuously participating in the BMIR. We consecutively included 9830 MI patients. Demographic data, data on reperfusion therapy and discharge medication, and on hospital mortality were analyzed.

Results:

	1999/2000 N=1645	2001/2002 n=1719	2003/2004 n=2250	2005/2006 N=2327	2007/1.4.2008 n=1889	p*
female gender	33.9%	33.2%	36.0%	35.4%	32.3%	0.633
Age >75years	30.6%	27.2%	30.4%	34.5%	27.9%	0.413
Time from symptom onset to hospital arrival ≤ 2h	48.7%	47.8%	42.6%	41.7%	42.2%	<0.001
STEMI (vs. NSTEMI)	76.4%	76.1%	62.6%	54.4%	49.5%	<0.001
Physician escorted rescue system	44.1%	42.0%	44.3%	50.1%	49.6%	<0.001
Primary PCI	18.4%	40.4%	62.3%	76.8%	79.9%	<0.001
thrombolysis	40.6%	29.8%	9.8%	3.4%	1.1%	<0.001
ASA and/or clopidogrel on discharge	91.1%	94.5%	97.1%	96.7%	97.7%	<0.001
Beta-blockers on discharge	70.3%	76.8%	76.8%	84.5%	87.8%	<0.001
ACE-inhibitors and/or ARBs on discharge	76.5%	83.9%	89.5%	89.3%	92.4%	<0.001
CSE-inhibitors on discharge	39.8%	57.5%	69.1%	76.8%	85.3%	<0.001
hospital-mortality	12.2%	11.8%	8.5%	7.8%	6.2%	<0.001

*p Chi Square Trend Test

Conclusions:

Over the 10 year period the total number and the percentage of NSTEMI-patients increased probably due to redefinition of acute myocardial infarction. Adherence to guidelines increased and hospital mortality was lowered, but time between symptom onset and hospital arrival increased.