Myocardial infarction in patients with diabetes mellitus - Changes in treatment and hospital-mortality over a 6-year period: Results from the Berlin Myocardial Infarction Registry (BHIR)

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Background:

Previous data have shown that patients with diabetes mellitus receive guideline-based therapy less frequently as compared with non-diabetics. Aim of the present study was to investigate the changes in treatment and hospital mortality in diabetic patients, differentiated for STEMI and NSTEMI, from 2000 to 2005 under the influence of the implementation of guideline-based therapy and the redefinition of acute myocardial infarction.

Methods:

In the BHIR, data of patients with acute myocardial infarction (AMI) have been collected prospectively since 1999. We analyzed the complete data set of 4 hospitals between 2000 and 2005. Demographic data, frequency of acute revascularization, medications at discharge, and hospital mortality in diabetic patients were analyzed over this 6-year period.

Results:

	NSTEMI				STEMI			
	2000/2001 n=65	2002/2003 n=75	2004/2005 n=172	p*	2000/2001 n=179	2002/2003 n=145	2004/2005 n=176	p*
female gender	50.0%	49.3%	41.3%	0.171	39.7%	32.9%	43.2%	0.502
mean age (years)	71.5	72.7	72.2	0.648**	70.6	69.0	70.2	0.460**
revascularization (<48h)	26.2%	34.2%	66.1%	<0.001	56.0%	66.0%	77.3%	<0.001
primary pci	19.7%	30.1%	66.1%	<0.001	24.6%	46.5%	69.3%	<0.001
ASA and/or clopidogrel	89.1%	88.5%	98.0%	0.005	93.5%	93.1%	98.4%	0.065
beta-blockers	87.3%	91.8%	95.3%	0.046	86.2%	92.2%	91.5%	0.152
ace-inhibitors	83.6%	85.2%	75.8%	0.137	83.3%	81.9%	85.3%	0.678
cse-inhibitors	61.8%	72.1%	86.6%	<0.001	55.1%	69.0%	80.6%	<0.001
hospital stay (d)	12	10	8	0.013**	12	10	9	0.005**
hospital-mortality	15.4%	13.5%	5.8%	0.014	19.7%	15.3%	14.3%	0.173

*p Chi Square Trend Test
** Kruskal Wallis Test

Conclusions:

1. The total number and the percentage of NSTEMI-patients increased over the 6-year period probably due to redefinition of acute myocardial infarction.
2. The frequency of vessel revascularization and the use of guideline-based therapy at discharge have significantly increased especially in NSTEMI-patients.
3. There was a significant decrease in hospital mortality in diabetic NSTEMI-patients.