Glycoprotein IIb/IIIa antagonists: what is their real impact on MACE rate and mortality in acute coronary syndromes?

Jean-Christophe Stauffer, Dragana Radovanovic, Philip Urban, Marco Maggiorini, Osmund Bertel, Paul Erne, for the AMIS investigators

Background: Practice guidelines have currently classified the administration of GP IIb/IIIa inhibitors (GP IIb/IIIa) in IIa for ST-elevation myocardial infarction (STEMI) and in I for non-STEMI (NSTEMI). The AMIS-Plus registry (Acute Myocardial Infarction in Switzerland) is a national prospective registry of acute coronary syndromes (ACS) offering the opportunity to study the impact of different treatment modalities on in-hospital outcome.
Methods: From January 1997 to September 2004, the AMIS-Plus data base included 15,852 patients with an ACS throughout Switzerland. Complete data on GP IIb/IIIa were available on 10,282 patients. The odds ratios (OR) of in-hospital mortality was calculated using logistic regression.

Results: Baseline characteristics and in-hospital outcome are presented in the table:

N=10,282	GP IIb/IIIa STEMI/NSTEMI N=3538 (34.4%)	No GP IIb/IIIa STEMI/NSTEMI N=6744 (65.6%)	P value
Female gender	23.8%	32.0%	P<0.001
Age mean ±sd **median**	61.5 ± 11.9 62y	67.1 ±13.2 69y	P<0.001
Killip class **Killip class I**	 83%	 71.3%	P<0.001
Killip class II	11.9%	20.1%	
Killip class III	2.6%	6.3%	
Killip class IV	2.2%	2.4%	
Diabetes	18.2%	21.3%	P<0.001
PCI any	83.4%	42.6%	P<0.001
Outcome	**GP IIb/IIIa**	**No GP IIb/IIIa**	
MACE rate	5.9%	10.4%	P<0.001
In-hospital mortality	3.4%	8.2%	P<0.001
Diabetic patients mortality N=2019	5.1%	12.5%	P<0.001

The patients admitted for ACS and receiving GPIIb/IIIa had a relative risk of 0.39 (CI95% 0.32-0.48) for in-hospital mortality compared with patients without GPIIa/IIIa administration. This was significant even after adjusting for age and sex (OR 0.58; 0.47-0.71). In multivariate regression analysis significant predictors of in-hospital mortality were: age per year (OR 1.06; 1.05-1.07), Killip Class II (OR 2.43; 1.96-3.01), Class III (OR 4.88; 3.74-6.37), Class IV (OR 19.99; 14.28-28.01), diabetes (OR 1.37; 1.13-1.66), GPIIb/IIIa (OR 0.75; 0.58-0.95) and primary PCI (OR 0.67; 0.52-0.87).

Conclusion: In Swiss hospitals, GP IIb/IIIa antagonists use on patients with ACS has a major favourable impact on MACE rate and in-hospital mortality. Patients with the worst prognosis still appear to receive less GP IIb/IIIa inhibitors than they deserve.

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