

In-Hospital Mortality following hospital admission for AMI in Switzerland: is it related to in house cath-lab availability?

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

Background: Several randomized trials have shown significant differences in favour of primary percutaneous coronary intervention (PCI) over thrombolysis using a composite endpoint including mortality, reinfarction and stroke. This analysis is designed to evaluate whether there is any impact of a cath-lab available in house (including primary PCI) on hospital mortality.

Method: From the AMIS-Plus data-base 7,861 patients admitted in 52 hospitals (January 2000 to October 2002) over Switzerland were extracted.

Results: The characteristics of the population of patients admitted in hospital without cath-lab (Pop 1) and with cath-lab (Pop 2) are shown in this table:

	Population 1	Population 2	
Number of cases	3860	4001	
Sex (n=7649) male female	69.8% 30.2%	75.5% 24.5%	p<0.001
Age (n=7766) mean ± sd median	67.6 ± 12.7y 69y	63.4 ± 12.9y 64y	p<0.001
Killip class (n=7585)			p<0.001
Killip class I	68.7%	73.8%	
Killip class II	21.4%	17.9%	
Killip class III	7.2%	5.5%	
Killip class IV	2.6%	2.8%	
Delay (median) (n=7251)	4:30 h	4:57 h	p<0.016
Thrombolysis (n=7782)	35.4%	25.3%	p<0.001
PCI primary (n=7861)	5.0%*	27.9%	p<0.001
PCI performed (n=3555)	27.4%*	67.4%	p<0.0001
Hospital stay (median) (n=7861)	10d	8d	p<0.001
In-Hospital Mortality (n=7791)	10.6%	8.9%	p<0.009

* performed at other center

Pop 2 was more often treated with reperfusion (thrombolysis + Primary PCI), and with primary PCI. This strategy was associated with a significantly lower mortality, but baseline characteristics such as age differed. A multivariate analysis of mortality predictors will be available at the time of presentation.

Conclusion: In Switzerland, reperfusion strategies are more often used in hospital with “in house” cath-lab, specifically primary PCI, and this appears to be associated with a survival benefit.