The “Smokers’ Paradox” in the AMIS Plus registry.

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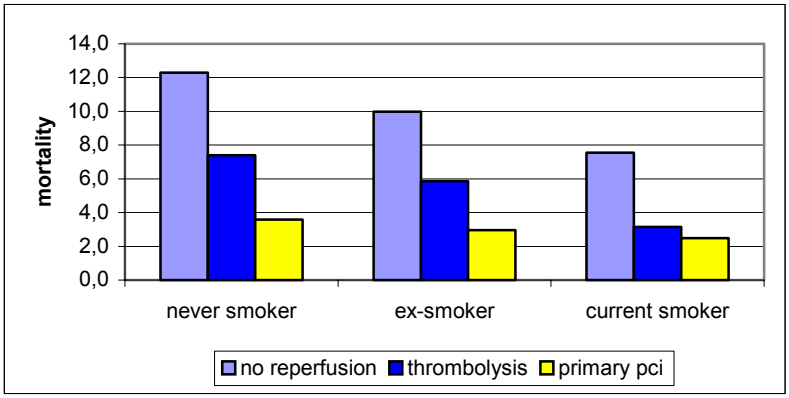
Background and Aim Smokers present a better in-hospital outcome after myocardial infarction compared to non-smokers. This has been described in several studies and is known as the “smokers’ paradox”. We investigated whether this phenomenon also occurs in the AMIS Plus registry.

Methods In the AMIS Plus registry (January 1997–December 2004), from a total of 16,501 ACS patients, data on smoking status was known for 15,622 cases. History of cigarette smoking was classified as current smoker: smoked at least 100 cigarettes (5 packs) in his life and is currently smoking, ex-smoker: stopped smoking more than 1 year before admission, never smoker: never smoked cigarettes. We included significant univariate predictors of in-hospital mortality in a logistic regression model in order to examine their independent association with in-hospital mortality.

Results Of the 15,622 cases, 39% were current smokers, 37% never smoked and 24% were ex-smokers. Current smokers were on average 12.4 years younger than non-smokers and 9.7 years younger than ex-smokers ($p<0.001$), had less CAD, hypertension and diabetes whereas never smokers presented less hyperlipidemia and overweight. Ex-smokers had more CAD, overweight and hyperlipidemia. Smokers were more likely to receive reperfusion therapy (59.8%) vs. ex-smokers (45.3%) and non-smokers (42.5%). The figure shows the benefit of reperfusion therapy according to smoking status.



The unadjusted in-hospital mortality rate was 4.7% in smokers, 7.3% in ex-smokers and 9.3% in non-smokers.

In the logistic regression model, independent mortality predictors were: age (OR 1.06, 1.05-1.07), Killip class IV (OR 16.5, 11.0-24.7), Killip class III (OR 5.1, 3.8-7.0), Killip class II (OR 2.5, 2.0-3.2), diabetes (OR 0.7, 0.5-0.8), hyperlipidemia (OR 1.4, 1.1-1.7) and primary PCI (OR 0.6, 0.4-0.8). Smoking was not significant (OR 1.31, 95% CI 0.99-1.75, $p=0.06$).

Conclusion

In the AMIS Plus registry, smokers have lower in-hospital mortality than non-smokers. However, smoking status was not significant after adjusting for co-factors. Better in-hospital outcome of smokers could be due to younger age, lower rates of Killip II-IV, diabetes, hyperlipidemia and higher rate of primary PCI.

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