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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