Previous Antiplatelet Treatment and Mortality in Patients With Intracerebral Hemorrhage

To the Editor:

Foerch et al\(^1\) reported that pretreatment with antiplatelet agents was not an independent risk factor of mortality and unfavorable outcome in patients with intracerebral hemorrhage (ICH). They studied 1691 patients with ICH and found that 26% of them were taking antiplatelet agents. Pretreatment with antiplatelet agents was a significant predictor of in-hospital mortality and unfavorable clinical outcome in the univariate logistic regression. However, after adjustment for age and prehospital status evaluated by the modified Rankin Scale, antiplatelet pretreatment was not an independent risk factor of in-hospital death.

Our group recently reported a detailed study demonstrating that previous antiplatelet therapy is an independent predictor of 30-day mortality after spontaneous supratentorial intracerebral hemorrhage\(^2\). In order to avoid any possible bias, we excluded patients with previous history of ICH, a prior modified Rankin Scale \(>2\), current anticoagulant treatment, infratentorial ICH, multiple ICH, primary intraventricular hemorrhage, ICH secondary to brain tumors, and patients treated by neurosurgical procedures. The impact of pretreatment with antiplatelet agents on mortality was controlled by age, as well as for other major determinants of ICH outcome such as Glasgow Scale Score (GSS), serum glucose level, volume of the ICH, and ventricular extension of the ICH. The percentage of ICH patients pretreated with antiplatelet agents in our study was 24.2%, a value similar to that found by Foerch et al (26%). In our study, the univariate analysis showed that previous antiplatelet treatment (OR: 2.77; 95% CI: 1.38 to 5.59; \(P=0.004\)) as age, GSS at admission, ICH volume, ventricular extension, transient ischemic attack or stroke, and current smoking were predictors of 30-day mortality, whereas ICH location, sex, prior history of diabetes mellitus, or heart diseases, were not associated with mortality. After logistic regression analysis, previous antiplatelet treatment (OR: 2.94; 95% CI: 1.09 to 7.94; \(P=0.034\)) as well as age, GSS at admission, glucose at admission, ICH volume, and ventricular extension remained as independent predictors of 30-day mortality in patients with first-ever acute supratentorial ICH.

The study by Foerch et al, although interesting because of the high number of patients with ICH evaluated, has some limitations. First, main outcome predictors of mortality after ICH such as the initial GSS, the volume of the ICH and the ventricular extension\(^3\) were not included in the statistical model. Second, there is no information concerning those cases with secondary ICH or those neurosurgically treated, both cases with a probably minimal impact of previous antiplatelet treatment. Third, the study was based on a large, country-wide prospective stroke including more than 100 hospitals, in which the medical procedures, length of stay, and mortality rates are probably quite different. This is a crucial point because the main outcome measures in the Foerch et al study were in-hospital mortality rate and functional status at hospital discharge. Finally, the statistical model used may be inadequate because the final outcome measures are time-dependent, so a Cox proportional hazards model would be more useful.

In conclusion, the previous use of antiplatelets is, in addition to well-defined classic factors, a novel predictor of negative outcome in patients with first-ever supratentorial ICH.

Disclosures

None.

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