Preventing major bleeding in acute coronary syndromes: lessons learned from the Global Registry of Acute Coronary Events (GRACE)

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Background: The most common noncardiac complication during therapy for ACS is the development of major bleeding. So far, no systematic studies have been carried out to identify predictors of major bleeding in patients with ACS. The aim of this study was to develop a prediction rule for identifying ACS patients who are at higher risk of major bleeding.



Figure. ORs of major bleeding according to baseline clinical characteristics

Methods and results: Data from 8010 GRACE patients were analyzed and predictors of major bleeding were identified using logistic regression analysis. Overall, the incidence of major bleeding was 2.9%. The following baseline characteristics were independently associated with a higher risk of bleeding: advanced age, being female, history of bleeding, and renal insufficiency (Figure). This association remained after adjustment for other variables such as the use of in-hospital therapies and invasive procedures.

Conclusions: Several baseline clinical characteristics identify ACS patients who are at higher risk of bleeding. Careful management of anticoagulation, combined with appropriate weighing of the risk/benefit ratio of therapeutic interventions and diagnostic procedures, may help to decrease the risk of major bleeding in patients with ACS.