Applying the evidence in acute coronary syndromes: a report card from the Global Registry of Acute Coronary Events


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Background: Significant advances have been made in the past decade in the treatment of patients with ACS, but many of these advances have not been integrated into routine clinical practice. The aim of this study was to accurately measure the use of evidence-based treatments for ACS from a multinational perspective using data from the GRACE study.

Methods and results: A total of 8213 patients with ACS were enrolled, and 7664 had a discharge diagnosis of ACS. Of these, 4773 patients had an AMI. Use of the following five evidence-based therapies was investigated: aspirin post-ACS for patients without serious bleeding and not on warfarin or another AP therapy; beta-blockers for patients post-MI without atrioventricular block or severe heart failure; ACE inhibitors for patients post-MI with CHF or reduced ejection fraction and without shock or renal insufficiency; reperfusion therapy for patients with STEMI or LBBB who present within 12 hours of the onset of symptoms and without clear contraindication; and either LMWH or intravenous GP IIb/IIIa inhibitors for patients with ST depression or positive cardiac markers.

Conclusion: The data from this broad and representative population of patients with ACS reveal that the use of evidence-based therapies ranges from 56–93%, therefore leaving substantial room for improvement (Figure).

![In-hospital management of patients with ACS (*P<0.01)](image_url)

Impact and treatment of diabetes (type 1 and 2) on prognosis in acute coronary syndromes – results from the Global Registry of Acute Coronary Events

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Background: Patients with ACS and diabetes mellitus have worse outcomes than nondiabetic patients with ACS. However, the improvement in outcomes observed recently in patients with ACS has not been seen in ACS patients with diabetes. Data from patients with type 1 diabetes are often analyzed together with those from patients with type 2 diabetes. However, the impact of the two types of diabetes on hospital outcomes in patients with ACS is unknown.

Methods and results: Data from patients enrolled in the GRACE study were analyzed. Baseline characteristics and in-hospital management and outcomes were compared for patients with type 1 and 2 diabetes, and for patients without diabetes (Table). Multivariate regression analysis revealed that both type 1 (OR 2.1) and type 2 (OR 1.8) diabetes are strongly predictive of in-hospital mortality and the development of heart failure or shock.

Conclusion: Patients with ACS and diabetes have higher rates of morbidity and mortality than ACS patients without diabetes. Furthermore, there are differences in the outcomes of patients with type 1 and type 2 diabetes, which are concealed if the data from these two groups are combined.

![Baseline characteristics and in-hospital events in patients with type 1, type 2 or without diabetes](image_url)