

Global use of revascularization for patients in cardiogenic shock: findings from the Global Registry of Acute Coronary Events (GRACE)

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Background: Randomized trials have shown that revascularization benefits patients with ACS complicated by cardiogenic shock. In this study, we determined the current use of revascularization for patients in cardiogenic shock using data from GRACE, a multinational observational registry of patients with the full spectrum of ACS.

Methods and results: Of the 10 709 patients with ACS enrolled in the GRACE registry, 535 patients with cardiogenic shock were identified. The use of revascularization and medications and rate of hospital mortality were determined for four geographic regions: ANC, AB, Europe and the USA (Table). Overall, a minority of shock patients (42%) underwent revascularization. The highest rate of revascularization combined with stenting was performed in the USA. Hospital mortality rates differed significantly across the regions, and this difference remained after adjusting for differences in baseline clinical characteristics. Multivariable regression analysis showed that PCI combined with stenting was the most powerful predictor of in-hospital survival (OR 5.8, 95% CI 3.3–10.4).

Conclusion: This study reveals that ACS patients with cardiogenic shock have a high rate of hospital mortality. Large geographic variations exist in the use of revascularization procedures, and PCI combined with stenting was most strongly associated with hospital survival

Region	Hospital mortality	Revascularization	PCI + stent	PCI + GP IIb/IIIa inhibitors
	Patients (%)			
AB	79	46	53	9
ANC	58	25	25	5
Europe	65	31	80	15
USA	39	57	80	26
P-value (4-way)	<0.0001	<0.0001	0.0019	0.0005

Table. In-hospital treatments and mortality rates of patients with ACS and in cardiogenic shock, by geographic location