

Atypical presentation of ACS independently predicts MI and increased in-hospital mortality: insights from the GRACE registry

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Background: Despite the common pathophysiology underlying ACS, which encompasses STEMI, NSTEMI and UA, many patients present with atypical symptoms. The aim of this study was to determine the clinical characteristics and prognostic significance of atypical presentations in ACS patients enrolled in the GRACE registry.

Characteristic	Atypical presentation	Typical presentation
Median age (years)	72.2	65.7
Female (%)	39.7	32.5
Diabetes (%)	31.2	23.5
History of heart failure (%)	22.5	9.7
MI (%)	75.2	61.7
Hospital revascularization (%)	26.5	35.9
Hospital death rate (%)	14.2	4.5

Table. Baseline characteristics and hospital mortality (all P<0.0001)

Methods and results: Data from 16,026 ACS patients were analyzed. Patients were grouped according to presenting symptoms (atypical vs typical) and baseline characteristics (Table). Hospital outcomes for the two groups were compared (Table). A total of 1324 (8.3%) patients with ACS presented without chest pain. The most common atypical presentations were dyspnea, diaphoresis, nausea/vomiting, and syncope/presyncope. Atypical presentations occurred most frequently in patients with NSTEMI (12.1%) followed by STEMI (8.0%) and UA (5.5%). Multivariate analysis revealed that an atypical presentation was independently predictive of both hospital mortality (OR 2.4, 95% CI 2.0-2.9) and a diagnosis of MI (2.0, 1.7-2.3).

Conclusions: Atypical symptoms are associated with a worse hospital prognosis. Patients who present with these symptoms should undergo close monitoring and appropriate treatment.