

Recent temporal trends for first-time hospitalization for acute myocardial infarction. Treatment patterns and clinical outcome in a large cohort study

Ortolani P, Marino M, Melandri G, Guastaroba P, Corzani A, Berti E, Rapezzi C, De Palma R, Branzi A.

BACKGROUND

The objective was to report recent trends in the incidence, adoption of evidence-based treatment, and clinical outcomes for first-time hospitalization for acute myocardial infarction.

METHODS

This is a large retrospective population-based cohort study using medical administrative data (International Classification of Diseases, Ninth Revision, Clinical Modification, codes) performed in the Emilia-Romagna Region of Italy (approximately 4.5 million inhabitants). We identified 60,673 patients with a first hospitalization for acute myocardial infarction from 2002 through 2009.

RESULTS

The standardized incidence rate per 100,000 person-years of acute myocardial infarction increased from 173 cases in 2002 to a peak of 197 cases in 2004 and then decreased each year thereafter to 167 cases in 2009. The proportion of patients who underwent coronary angiography and angioplasty in the acute phase increased over time, respectively, from 45.4% and 27.1% to 72.3% and 57.2% ($P < .001$). Medication use within 12 months of discharge increased for aspirin, β -blockers, and statins. A reduction in crude and adjusted in-hospital all-cause (16.1% in 2002 vs 12.8% in 2009, $P < .001$) and cardiovascular mortality (13.6% in 2002 vs 9.5% in 2009, $P < .001$) was observed over time. At 1 year after hospital discharge, no significant variations occurred in adjusted risk for all-cause mortality or cardiovascular mortality. Notably, crude and adjusted risk for in-hospital and postdischarge bleeding showed a significant increment.

CONCLUSIONS

The utilization of evidence-based treatments in patients with myocardial infarction increased between 2002 and 2009. These changes in practice over time favored a reduction in early case fatality at the cost of a significant increase in bleeding.