Adherence to guideline-based therapy has led to a reduction of hospital mortality in patients with myocardial infarction presenting with and without ST-segment elevation

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Context: Guidelines for treatment of patients with myocardial infarction (MI) have been regularly updated. In addition, a new definition for acute MI has been recently established.

Aim of the study: The aim of our study was to evaluate development of treatment and effects on patient outcome.

Material and Method: We prospectively collected data from 6080 consecutive MI patients presenting with (STEMI, $n = 4314$) and without ST-segment elevation (NSTEMI, $n = 1766$) who were treated in 22 hospitals in Berlin, Germany, in the years 1999 to 2004.

Results: STEMI and NSTEMI patients showed an increase over time in arterial hypertension, smoking, hypercholesterolaemia, history of congestive heart failure, and renal failure.

The application of acute percutaneous coronary intervention increased from 15.3% to 62.3% ($p < 0.001$) for NSTEMI and from 24.7% to 71.8% ($p < 0.001$) for STEMI patients.

Concomitant therapy with beta-blockers, ACE inhibitors, statins, GP IIb/IIIa, and aspirin increased in parallel in both groups.

The decrease in hospital mortality was more pronounced for NSTEMI (13.5% vs. 4.6%, $p <0.001$) than with STEMI patients (13.0% vs. 9.4%, $p = 0.005$).

Conclusion: Adherence to guidelines has led to a higher level of hospital care for NSTEMI and STEMI patients. Hospital mortality decreased for both groups, with a greater impact on NSTEMI patients.