

# Temporal trends in drug therapy for ST segment elevation myocardial infarction

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**Purpose:** Recent guidelines based on randomised controlled trials recommend the prescription of several drug therapies during acute phase and upon discharge for ST segment elevation myocardial infarction (STEMI). The objective of the current study is to determine the impact of these guidelines on daily clinical practice.

**Methods:** We reviewed the prescription of several drug therapies (aspirin, thienopyridines, beta-blockers, angiotensin converting enzyme inhibitors/angiotensin receptor blockers [ACEI/ARB], lipid-lowering drugs [LLD], calcium channel blockers [CCB] and nitrates) during acute phase and upon discharge for STEMI in AMIS Plus, a nationwide multicentre registry of patients admitted for acute coronary syndrome in 68 hospitals in Switzerland.

**Results:** Among the 19461 patients included from 1997 to 2005, 11543 showed ST segment elevation or left bundle branch block on the ECG at admission. During the study period, there was a significant increase in the proportion of patients treated in the acute phase with all drugs, with the exception of nitrates which decreased (graph). Likewise, similar trends were observed with discharge therapy, although there was no significant change for CCB. The major increase in prescription of thienopyridines was explained by the growing proportion of patients undergoing primary percutaneous coronary intervention (8% in 1997 to 74% in 2005). Furthermore, the overall increase of drug prescription during the acute phase was accompanied by a significant reduction of hospital mortality during the study period (12.2% to 7.0%,  $p < 0.001$ ).

**Conclusions:** Current recommendations concerning the use of drug therapy during acute phase and upon discharge for STEMI are being adequately followed. This is associated with a decrease of in-hospital mortality.

