

Prospective validation of ACCA quality indicators on optimal medical therapy in consecutive patients with acute myocardial infarction of a tertiary care center

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Introduction

The Acute Cardiovascular Care Association (ACCA) has developed quality indicators (QIs) for patients with acute myocardial infarction (MI), including specific definitions of optimal medical therapy (OMT).

Purpose

We sought to verify adherence to ACCA QIs on OMT in consecutive patients admitted for acute coronary syndrome (ACS) in a tertiary hospital and to examine association of OMT with survival.

Methods

According to ACCA QIs we considered the following at discharge:

- Optimal dual antiplatelet therapy;
- Optimal secondary prevention;

OMT status was defined as a patient-level, binary all-or-none composite QI. We excluded patients with clear or documented contraindications to each drug analysed. We assessed association of OMT with survival using Cox regression analysis with age, sex, anemia, cancer, creatinine, LVEF and prior MI as covariates. Finally, we assessed appropriate in-hospital fondaparinux in eligible Non-ST Elevation (NSTEMI) ACS patients.

Results

A total of 1,524 ACS patients were consecutively and prospectively enrolled as part of a quality improvement initiative. Of these, 1,299 (85.2%) survived the index ACS and were discharged with a final diagnosis of acute MI or unstable angina. Overall, 55.9% of eligible AMI patients received OMT. Adherence to individual QIs components is showed in the Table.

During a mean follow-up of 262 days after hospital discharge we observed 58 deaths. Cox regression multivariable analysis showed that OMT was a strong and independent predictor of long term survival with a HR of 0.33 (95% CI = 0.17–0.65, p=0.001). Kaplan-Meier analysis both in the overall ACS cohort and stratified by NSTEMI-ACS and STEMI-ACS is showed in the Figure.

Conclusions

OMT is an important, independent and modifiable predictor of survival in a large population of consecutive patients discharged with AMI. These data identify substantial opportunities for quality improvement in our Center and support widespread and systematic implementation of ACCA QIs to improve acute MI care.

	Overall		
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	ACS N = 1,299	NSTE-MI N = 589	STE-MI N = 672	Unstable Angina N = 38
ASA	95.5	95.1	96.1	89.5
P2Y ₁₂ inhibitor	90.6	84.9	96.6	73.7
Highly effective statin	85.5	82.1	89.3	71.1
Optimal DAPT	81.8	79.8	86.0	39.5
Optimal secondary prevention	79.8	76.1	83.0	0
Appropriate Fondaparinux	-	50.9	-	-
Optimal Medical Therapy	55.9	35.8	73.5	-

Data are expressed as valid %.

