

Prediction of long-term survival in patients receiving optimal secondary prevention therapy after acute myocardial infarction: the FAST-MI registry

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Background: Predictors of long-term outcome in optimally-treated patients after AMI have not been extensively studied.

Aim: We assessed 3-year survival in a population of 3,262 patients from the FAST-MI registry who were discharged alive after the acute episode.

Results: At hospital discharge, 1586 patients (49%) received optimal medical treatment (OMT: antiplatelet + beta-blocker + statin + ACE-I or ARB agents). Patients receiving OMT were younger (64 ± 13 vs 69 ± 14 years, $p < 0.001$), had a lower GRACE risk score (141 ± 33 vs 151 ± 36 , $p < 0.001$) and had more use of PCI during index hospitalization (75% vs 56% , $p < 0.001$). Three-year survival was 88% in patients with OMT versus 77.5% in patients without ($p < 0.001$). Cox multivariate analysis was used to determine predictors of 3-year mortality and covariates included age, sex, risk factors, comorbidities, type of AMI, CAD extent, use of PCI, use of CABG, in-hospital complications, and other discharge medications. Overall, adjusted HR for 3-year death was 0.82 (0.68-1.00), $p = 0.048$, for patients receiving OMT, confirming the benefit of comprehensive therapy beyond each of its individual components. In the 1586 patients receiving OMT at discharge, independent predictors of long-term death were age ≥ 75 years [HR 1.93 (1.03-3.64)]; AMI type and severity [STEMI vs NSTEMI: HR 0.64 (0.44-0.93); GRACE score: HR 1.01 (1.00-1.01); LVEF $< 40\%$: HR 2.03 (1.31-3.16); 3-vessel CAD: HR 2.12 (1.28-3.52)]; previous CV history [stroke: HR 1.91 (1.29-2.83), CHF: HR 1.79 (1.11-2.88)]; management with an invasive strategy [HR 0.31 (0.17-0.56)], and associated conditions [history of diabetes HR 1.79 (1.28-2.49); history of cancer HR 2.76 (1.75-4.33); current smoking at the time of AMI HR 1.88 (1.20-2.94)].

Conclusion: In patients receiving OMT after AMI, early invasive management remains a significant predictor of improved survival, while associated non cardiac conditions (and in particular cancer, diabetes, previous TIA or stroke, and smoking) are major determinants of higher long-term mortality.