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Adherence to optimal medical therapy in Asian patients with acute myocardial infarction treated with PCI

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On behalf: SingCLOUD collaborators

Topic(s):
Coronary Artery Disease: Pharmacotherapy

Citation:

Background: Notable regional differences have been observed worldwide in clinical characteristics and outcomes in patients experiencing acute myocardial infarction (AMI). Asian patients present younger and report higher adverse outcomes rates compared to Western cohorts. The reasons are multifactorial, but adherence to medication prescription guidelines is one of the modifiable factors.

Purpose: Our aim was to study the effect of physician adherence to Optimal Medical Therapy (OMT) prescription guidelines on a MACE outcome in a high-risk group of Asian AMI patients over 1 year following percutaneous coronary intervention (PCI).

Method: Data for this retrospective study was from the Singapore Cardiac Longitudinal Outcomes Database (SingCLOUD) pilot study involving AMI patients surviving primary PCI at two tertiary centers from 2012 to 2013. Guideline-directed OMT adherence was defined as concurrent prescription of at least one statin plus dual antiplatelet therapy (DAPT – aspirin plus P2Y12-I). Prescription of \(\beta\)-blockers and ACE-i/ARBs was also recorded. Prescription status and MACE (repeat MI, stroke, death) was recorded at discharge, 3, 6 and 9 months, and 1 year following the index discharge. The cumulative effect of OMT adherence at 3, 6, 9 months and 1 year post-discharge was studied by comparing risk of first MACE among patient groups with complete, partial and non-adherence to OMT prescription guidelines.

Results: 2,478 patients, 80.3% males, mean age 60.3±11.7 years were studied. 1094 (44.1%) underwent primary PCI for STEMI. Single drug prescription at discharge for aspirin, P2Y12-I, and statins was 95, 97 and 95.8%, while prescription of \(\beta\) -blockers and ACE-inhibitors was 86.5 and 75.7%. Prescription of statins and aspirin declined gradually while P2Y12-I fell to 67.9% at 6mo and 47.6% at 1 year. Adherence to OMT declined from 92.3% at discharge to 82.1, 58.5, 56.1 and 40.3% at 3, 6, 9 months and 1 year, respectively. Of 342 (13.8%) occurrences of first MACE, 48.5% occurred within 3mo post-discharge. Complete adherence to OMT upon discharge significantly decreased risk of MACE at 3mo (OR=0.066; 95% CI: 0.054-0.080; p<0.001) and 12mo (OR=0.017; 95% CI: 0.010-0.028; p<0.001) relative to non-adherence.

Conclusion: Over the course of a year in this high-risk group of PCI-treated AMI patients, there was a reduction in prescription adherence to the minimally essential OMT. Complete OMT adherence is beneficial in reducing MACE. Interventions targeting reasons for non-adherence are important in improving patient outcomes.
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