

(NMA) and direct meta-analysis were performed to compare the therapies.

RESULTS Five observational studies and one randomized controlled trial with 7,454 patients were included. Patients were treated with clopidogrel and aspirin (n=4,116), ticagrelor and aspirin (n=629) or aspirin monotherapy (n=2,709) according to study protocol. For all-cause mortality, there was a trend in favor of DAPT with clopidogrel compared to ticagrelor, but the effect was not statistically significant (risk ratio 0.87 [95% CI 0.54-1.5]). The risk of major bleeding was also found to be not statistically significant between the clopidogrel and ticagrelor combinations (1.1 [95% CI 0.78-1.6]). The results of direct meta-analysis found a statistically significant effect favoring DAPT with clopidogrel compared to ticagrelor for overall bleeding (0.62 [95% CI 0.47-0.82]) and minor bleeding (0.51 [95% CI 0.31-0.84]). No difference was observed for life-threatening bleeding (0.95 [95% CI 0.78-1.15]).

CONCLUSIONS In patients at high risk of bleeding, DAPT with clopidogrel yields reduced overall bleeding and minor bleeding events, with similar all-cause mortality compared to ticagrelor. There is limited data for ticagrelor in patients with high bleeding risk and a lack of standard techniques for risk stratification in the setting of ACS. Further evidence is needed to establish reliable guidance for prescribers when selecting optimal DAPT strategies in these patients.

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Clinical Outcomes Associated with Medical Management versus Coronary Intervention in Patients with Acute Coronary Syndrome



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OBJECTIVES An invasive management strategy with percutaneous coronary intervention (PCI) is recommended in patients with acute coronary syndrome (ACS), with or without ST-segment elevation, who are eligible for revascularization. However, there is still wide variation observed in the real-life use of coronary interventions across hospitals. There is need to understand the benefits and risks of management choices in everyday clinical practice. The aim of this review and meta-analysis was to examine the relative efficacy and safety of medical management versus invasive management with PCI for the treatment of ACS in the real-world.

METHODS A comprehensive literature search was conducted in MEDLINE and Embase databases from 2007 onward to identify observational studies that compared patients with ACS who were treated medically or had undergone PCI. A pairwise meta-analysis using a random effects model was performed to estimate odds ratios with 95% confidence intervals. The primary efficacy endpoints included all-cause mortality, cardiovascular mortality, and major adverse cardiovascular events (MACE), defined as the composite of death, reinfarction, recurrent revascularization, heart failure, cardiac arrest, cardiac shock, and stroke. The primary safety endpoint was major bleeding, defined as fatal or life-threatening, intracranial, associated with a 15% decrease in hematocrit, at least a 3-5 g/dL fall in hemoglobin, needing transfusion or surgical intervention.

RESULTS A total of 15 studies reporting data for 43,927 patients were included in this analysis. Management with PCI showed statistically significant reduction in the odds of mortality in-hospital (OR 0.28 [95% CI 0.23-0.35]; $p < 0.0001$), at 4 weeks (OR 0.28 [95% CI: 0.14-0.57]; $p < 0.001$), and at 1 year (OR 0.27 [95% CI: 0.18-0.41]; $p < 0.0001$). In subgroup analyses, the in-hospital mortality remained significantly lower with PCI in ST-elevation myocardial infarction (STEMI) patients (OR 0.30 [95% CI 0.26-0.35]) and non-STEMI or unstable angina patients (OR 0.30 [95% CI 0.26-0.35]). The risk of in-hospital

cardiovascular mortality (OR 0.34 [95% CI: 0.27-0.44]; $p < 0.0001$) and MACE (OR 0.36 [95% CI: 0.32-0.41]; $p < 0.0001$) were lower with PCI than with medical management. In-hospital major bleeding was similar in the two groups (OR 1.05 [95% CI 0.63-1.53]; $p = 0.81$).

CONCLUSIONS An invasive management strategy with PCI is associated with significant reductions in the risk of in-hospital mortality and cardiovascular events compared to medical therapy only. A significant reduction mortality with PCI was also observed at 4 weeks and 1-year follow-up. The results of this analysis found greater clinical benefit with PCI on mortality and cardiovascular endpoints without increased risk of major bleeding complications compared to medical management. These findings underscore the importance of adherence to guideline-recommended management strategies and increasing patient access to PCI-capable facilities.

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Endpoints in patients with myocardial infarction

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OBJECTIVES Study of endpoints in patients with myocardial infarction.

METHODS The study included 76 male patients with primary Q-wave MI, not older than 10 days between the ages of 29 to 60 years. According to the study the final analysis included data of patients who within one year from the start of them to develop meaningful clinical outcomes: death, recurrent nonfatal MI; occurrence or progression of heart failure or coronary artery disease destabilization that required hospitalization.

RESULTS We have evaluated the forecast in the studied groups of patients. The analysis showed that in 1 years of follow-noted development reinfarction in 14 (18.4%) cases, including 5(6.6%) fatal and nonfatal - 9 (11.8%), and 6 (7.9%) cases of sudden death. Depending on the development of reinfarction analysis on various factors showed that recurrent MI was significantly more likely to develop at the rear location of the primary IM ($\chi^2 = 13,25$; $P = 0.001$), and the statistical significance of this distribution is preserved as in the case of a fatal ($\chi^2 = 20,1$; $P = 0,0001$), and nonfatal MI ($\chi^2 = 18,366$; $P = 0.001$).

Availability initially cardiac arrhythmia also significantly influences the development of reinfarction: in the group with cardiac arrhythmia in 10.5% of cases developed reinfarction ($P < 0.001$). Analysis of prognostic parameters showed that patients who developed adverse outcomes for extended surveillance had a greater number of heart rate, lower left ventricular ejection fraction less than 40%.

CONCLUSIONS Determination of early predictors of poor prognosis in patients with myocardial infarction identifies patients at high cardiovascular risk.

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Prognostic value of fractalkine/CX3CL1 concentration in patients with acute myocardial infarction treated with primary percutaneous coronary intervention

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OBJECTIVES This study aimed to investigate the prognostic value of circulating fractalkine (FKN) in patients with ST-elevated acute myocardial infarction (STEMI) after primary PCI.

METHODS We enrolled ninety consecutive STEMI patients and investigated the association of circulating FKN with myocardial salvage and the occurrence of major adverse cardiac events (MACE) after PCI.

RESULTS During a median follow-up of 387 days, total 15 MACE (16.67%) were registered in the study population. Patients with MACE were more likely to be occurred in elderly patients with 3-vessel disease. Correlation analysis demonstrated the level of FKN at day 1 after PCI (FKN@day-1) not only significantly correlated with the levels of hs-TnT at day 7 after PCI ($R^2 = 0.06$; $p = 0.02$) but inversely correlated with the measurements of LVEF at 1-month observation ($R^2 = 0.10$; $p < 0.001$). Kaplan-Meier survival analyses further revealed that patients with the level of FKN@day-1 above the median had a higher