

Clopidogrel plus aspirin versus ticlopidine plus aspirin after coronary stent implantation: a meta-analysis of randomized controlled trials

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Background and Aims: Combination therapy with ticlopidine plus aspirin can reduce risk of thrombosis after coronary stent implantation. Adverse effects of ticlopidine limit its use. Clopidogrel newer member of thienopyridines family has better safety than ticlopidine. Based on our information there are many underpowered trials to compare these two regimen after coronary stent implantation. The aim of this study was to compare efficacy and safety of ticlopidine plus aspirin and clopidogrel plus aspirin after coronary stent implantation by a systematic review of the literature.

Methods: Randomized controlled trials (RCTs) were eligible for inclusion and were identified by searching the Pubmed, Elsevier, Cochrane library, Center for reviews and Dissemination (CRD) and Iranmedex (Iranian medicine database) databases and the manual searching of Reference lists of published studies. Studies were included if patients had been treated with Clopidogrel plus aspirin in compared with ticlopidine plus aspirin. Trial selection, data extraction, and methodological quality were assessed by two independent reviewers. Relative risk (RR) (clopidogrel plus aspirin as trial group and ticlopidine plus aspirin as control group) were calculated. Results are displayed with their 95% confidence intervals (CIs).

Results: Five RCTs were included. Rate of major adverse cardiac events (MACE) was equal in two groups (RR 1.077, 95% CI 0.697 to 1.663, $p = 0.738$). Occurrence of major adverse side effects (MASE) was significantly lower in clopidogrel plus aspirin group (RR 0.048, 95% CI 0.346 to 0.666, $p = 0.000$).

Conclusions: Based on our analysis clopidogrel plus aspirin and ticlopidine plus aspirin are equal in efficacy but safety of clopidogrel plus aspirin is more than ticlopidine plus aspirin.

Keywords: Clopidogrel; Ticlopidine; Coronary stenting; Meta-analysis