

Comparison among oral antiplatelet therapies for the effectiveness and safety following intracoronary stenting - meta-analysis

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Abstract :

Objective

To determine the effectiveness and safety on clinical outcome of oral antiplatelet therapies following intracoronary stenting.

Design

Published studies retrieved through Medline and other databases from 1966-2002. Meta-analyses evaluated the outcome and adverse clinical events of three drug regimens used after intracoronary stenting procedures; aspirin alone vs. aspirin plus ticlopidine, aspirin vs. cilostazol and aspirin plus ticlopidine vs. aspirin plus cilostazol.

Main outcome measures

Major adverse cardiac events (MACE), minimal lumen diameter of diseased vessels (MLD), and adverse clinical events following intracoronary stenting were compared and evaluated between the two study arms and expressed by the mean difference or odds ratios specific for the individual studies and meta-analytic summary for the mean difference or odds ratios.

Results

Twelve trials met inclusion criteria, and meta-analysis was performed. The combination therapy of aspirin plus ticlopidine was superior to aspirin single therapy for outcome, but not in adverse clinical events. Cilostazol single therapy in MLD was significantly superior to aspirin single therapy. In a comparison of the combination therapy of aspirin plus ticlopidine with aspirin plus cilostazol, the combination therapy of aspirin plus cilostazol was significantly superior to that of aspirin plus ticlopidine with regards to late restenosis, additional target lesion revascularization, the pooled MACE, MLD, leukopenia, thrombocytopenia or neutropenia, elevated aminotransferase and all pooled adverse clinical events.

Conclusion

Our results suggest that the combination therapy of aspirin plus cilostazol is superior for effectiveness, particularly in preventing late restenosis, and in safety as compared to other oral antiplatelet therapies, aspirin and/or ticlopidine. Although cilostazol has few serious adverse clinical events, the monitoring for increased heart rate or occurrence of arrhythmia as well as adverse clinical events needs to be done regularly.

Keywords : antiplatelet therapy, effectiveness, major adverse cardiac events, intracoronary, stenting, meta-analysis