INPLASY PROTOCOL

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Support: **None.**

Review Stage at time of this submission: **The review has not yet started.**

Conflicts of interest:
None declared.

Duration of dual antiplatelet therapy after PCI and the choice of subsequent monotherapy - a systematic review and network Meta-analysis

Zheng, N[1];Jia, S[2]; Zhong, JY[3]; Jiang, LF[4].

Review question / Objective: **The optimal timing of dual antiplatelet therapy (DAPT) after percutaneous coronary intervention (PCI) is controversial. At least until now, there is no optimal timing of treatment. Instead of the standard 6- to 12-month DAPT followed by aspirin monotherapy, short-term DAPT (one month to three months) followed by P2Y12 monotherapy after PCI has been suggested. However, there are still questions regarding the use of aspirin or P2Y12 monotherapy.**
Condition being studied: **After percutaneous coronary intervention (PCI), dual antiplatelet therapy (DAPT), including aspirin and P2Y12 inhibitors, followed by long-term aspirin monotherapy, is usually recommended. However, the optimal duration of DAPT remains controversial. A longer duration of DAPT is associated with lower thrombotic events but a higher risk of bleeding. In clinical trials, shorter durations of DAPT have been shown to be non-inferior to standard DAPT therapy. Therefore, the choice of how to proceed with dual antiplatelet timing and subsequent agents is critical.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 05 April 2022 and was last updated on 05 April 2022 (registration number INPLASY202240025).

INTRODUCTION

Review question / Objective: **The optimal timing of dual antiplatelet therapy (DAPT) after percutaneous coronary intervention (PCI) is controversial. At least until now, there is no optimal timing of treatment. Instead of the standard 6- to 12-month DAPT followed by aspirin monotherapy, short-term DAPT (one month to three months) followed by P2Y12 monotherapy after PCI has been suggested. However,**

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METHODS

Participant or population: Patients undergoing percutaneous coronary intervention.

Intervention: Patients undergoing percutaneous coronary intervention receiving dual antiplatelet therapy for various durations followed by P2Y12 or aspirin monotherapy.

Comparator: Traditional DAPT in patients undergoing percutaneous coronary intervention.

Study designs to be included: Studies were considered eligible if they met the following criteria. (1) Designed as randomized controlled trials (RCTs) (2) Reported the effect of P2Y12 or aspirin monotherapy versus conventional DAPT after dual antiplatelet therapy (DAPT) of different duration in patients undergoing percutaneous coronary intervention (3) Reported yan'ji of outcome events including MACE, myocardial infarction, stroke, etc.

Eligibility criteria: Studies were considered eligible if they met the following criteria. (1) Designed as randomized controlled trials (RCTs) (2) Reported the effect of P2Y12 or aspirin monotherapy versus conventional DAPT after dual antiplatelet therapy (DAPT) of different duration in patients undergoing percutaneous coronary intervention (3) Reported yan'ji of outcome events including MACE, myocardial infarction, stroke, etc.

Information sources: We systematically searched the Cochrane Library, PubMed, Embase, Scopus, Web of Science, and ovid databases for eligible studies from inception through Apr 6, 2022. two groups of keywords: “dual antiplatelet” and “percutaneous coronary intervention”.

Main outcome(s): A composite endpoint consisting of all-cause death, myocardial infarction, and Stent thrombosis.

Additional outcome(s): Cardiovascular death, bleeding events, revascularization, ischemic stroke and other events.

Quality assessment / Risk of bias analysis: The methodological quality of the RCTs was assessed using the Cochrane Collaboration’s Risk of Bias tool.

Strategy of data synthesis: ORs were used as common risk estimates. Pooled ORs were estimated by pooling study-specific estimates using a random effects model to account for inter-study heterogeneity. To assess the heterogeneity of ORs between studies, the I^2 (95% CI) statistic was calculated and interpreted as follows: low heterogeneity, defined as I^2 75%. Possible publication bias was assessed using funnel plots. All statistical analyses were performed with Review Manager (RevMan) software (version 5.30, Nordic Cochrane Center, Rigshospitalet, Denmark) and Stata software (version 16.0, Stata Corp LP, College Station, Texas, USA). p values < 0.05 was considered to be statistically significant.

Subgroup analysis: If the amount of data is sufficient and the heterogeneity is large, we will perform relevant subgroup analyses.

Sensitivity analysis: Sensitivity analysis is not required at this time in the network Meta-analysis.

Country(ies) involved: China.

Keywords: Percutaneous Coronary Intervention, monotherapy, Dual Anti-Platelet Therapy.

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