INPLASY PROTOCOL

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Conflicts of interest:
None declared.

The intense lipid-lowering strategies of PCSK9 inhibitor or ezetimibe and cardiovascular events after acute coronary syndrome : a systematic review and meta-analysis

Sun, JC[1].

Review question / Objective: **To investigate the clinical outcomes of PCSK9 inhibitor or ezetimibe after acute coronary syndrome.**
Condition being studied: **The improvement of cardiovascular outcomes in patients with coronary heart disease who are prescribed intense lipid-lowering strategies of PCSK9 inhibitor or ezetimibe underding the background treatment of statins is proven. However, to our knowledge, no meta-analysis has assessed the clinical benefits of PCSK9 and ezetimibe after acute coronary syndrome.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 12 April 2023 and was last updated on 13 April 2023 (registration number INPLASY202340040).

INTRODUCTION

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METHODS

Participant or population: Patients after acute coronary syndrome.

Intervention: Treatment of PCSK9 or ezetimibe underding the background treatment of statins.

Comparator: Statins were used as the intervention measure in the control group.

Study designs to be included: RCTs.

Eligibility criteria: Patients using extra lipid-lowering drugs are excluded.

Information sources: PubMed, Embase and the Cochrane Library will be searched for potentially relevant studies without being restricted to language, publication year, or region. To acquire gray literature, we manually searched reference lists of included articles and searched for relevant studies from gray literature databases.

Main outcome(s): The primary outcome was coronary heart disease death, all-cause death, nonfatal myocardial infarction, fatal or nonfatal ischemic stroke, and unstable angina requiring hospitalization.

Quality assessment / Risk of bias analysis: A version of ROB2 for individually-randomized, parallel-group trials is applied to included studies.

Strategy of data synthesis: Stata Statistical Software version 16.0 was used for the analysis. The two-sided P values were evaluated for significance at an alpha level of 0.05. A pooled HR and 95% confidence intervals were calculated. If there was significant heterogeneity among studies, the random-effects model of Dersimonian and Laird was applied; otherwise, the fixed-effects model was employed.

Subgroup analysis: Subgroup analysis was performed according to types of ACS, types of intervention drugs, and drug doses.

Sensitivity analysis: Trials were deleted sequentially to assess the stability of outcomes.

Country(ies) involved: China.

Keywords: PCSK9 inhibitor; ezetimibe; coronary heart disease.

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