

INPLASY PROTOCOL

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Support: Temporarily No.

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

Conflicts of interest:
None declared.

INTRODUCTION

Review question / Objective: In this study, a systematic review and meta-analysis of the clinical research literature on roles of statins for acute pancreatitis was carried out, in order to obtain a larger sample data, discover the role of statins in the

Roles of statins for acute pancreatitis: A protocol for systematic review and meta-analysis

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Review question / Objective: In this study, a systematic review and meta-analysis of the clinical research literature on roles of statins for acute pancreatitis was carried out, in order to obtain a larger sample data, discover the role of statins in the pathogenesis and treatment of acute pancreatitis, and provide evidence-based medicine for clinical and scientific research.

Condition being studied: Acute pancreatitis is a common acute abdomen. The main causes of it include cholelithiasis, alcoholism, hyperlipidemia, drugs, trauma or surgery, among which drug-induced acute pancreatitis is more and more well known. As we all known, statins can be used to relieve the clinical symptoms of acute pancreatitis, especially with the increase of the incidence of hyperlipidemic pancreatitis, the therapeutic effect of statins has been confirmed. However, with the wide application of statins, their adverse effects are gradually being recognized, including acute pancreatitis. Therefore, the aim of this meta-analysis is to evaluate the roles of statins for acute pancreatitis to provide a better basis for clinical decision making.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 13 February 2022 and was last updated on 13 February 2022 (registration number INPLASY202220043).

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METHODS

Participant or population: Adult who use statins to treat or patients suffer pancreatitis due to statins.

Intervention: Acute pancreatitis patients with statins who have bad prognosis.

Comparator: Acute pancreatitis patients with statins who have good prognosis.

Study designs to be included: Eligible prospective/retrospective cohort study or randomized controlled trials(RCTs) will be include in this study.

Eligibility criteria: We will include eligible prospective/retrospective cohort study or randomized controlled trials (RCTs) of the roles of statins for acute pancreatitis.

Information sources: We will search for publications from PubMed, Web of science, EMBASE, Cochrane Library, Google scholar, China National Knowledge Infrastructure (CNKI), Wan fang and China Science and Technology Journal Database(VIP). Two independent reviewers will read the full English text of the articles, screened and selected carefully, removing duplication. Then we evaluate the quality and analyses data by Review Manager (V.5.4). Results data will be pooled and meta-analysis will be conducted if there's 2 eligible studies considered.

Main outcome(s): Risk of acute pancreatitis due to the statins.

Additional outcome(s): None.

Quality assessment / Risk of bias analysis: The Grading of Recommendations, Assessment, Development and Evaluation (GRADE) assessment tool will be used for conducting an appraisal of the studies' methodological quality. Every selected study will be evaluated by 2 reviewers independently, a third one as a consulter. The GRADE evaluation system included bias risk; heterogeneity; indirectness; imprecision; publication bias. And each level of evidence is divided into "very low", "low", "moderate", or "high" judgment.

Strategy of data synthesis: For qualified articles, we would like to combine the collected data according to characteristics of eligible trials. In line with the Cochrane guideline, we will express risk ratio with 95% confidence intervals (95%CI) using fixed effect model. Besides the random effect model will be used for continuous outcomes because of clinical heterogeneity. Statistical heterogeneity will be investigated using χ^2 test and I² statistic (50%, strong heterogeneity). We will assess possible publication bias using the Egger funnel plot. All data will be performed by using Review Manager (RevMan version 5.4.0) software and P value < 0.5 will be considered statistically significant.

Subgroup analysis: Subgroup analysis will be conducted according to the result of evaluation.

Sensitivity analysis: Not Applicable.

Language: The language is limited to English and Chinese.

Country(ies) involved: China.

Keywords: statin; prognosis; acute pancreatitis; systematic review; meta-analysis.

Contributions of each author:

Author 1 - Sun Yao.

Author 2 - Ni Xiaoyu.

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