INPLASY

Targeting PCSK9 in Heterozygous familial hypercholesterolemia: a meta-analysis of randomized controlled trials

Corresponding author:
Chang Meng

15931865117@163.com

Author Affiliation:
Affiliated Hospital of Hebei University.

Zhang, LN; Zhang, F; Jia, XW; Xie, JM; Zhu, YR; Zhou, XZ; Meng, C.

ADMINISTRATIVE INFORMATION

Support - None.

Review Stage at time of this submission - Data analysis.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202430095

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 24 March 2024 and was last updated on 24 March 2024.

INTRODUCTION

Review question / Objective We sought to conduct a systematic review and meta-analysis to evaluate the safety and efficacy of PCSK9 inhibitors for Heterozygous familial hypercholesterolemia (HeFH).

Condition being studied Low density lipoprotein(LDL) change, High density lipoprotein(HDL) change, treatment-emergent adverse event(TEAE), liver function lesion.

METHODS

Participant or population Patients with HeFH.

Intervention Treat with PCSK9 inhibitors or Placebo.

Comparator Placebo.

Study designs to be included The search strategy was RCTs.

Eligibility criteria (1) Patients with HeFH. (2) Treat with PCSK9 inhibitors or Placebo.

Information sources We will search the references in the included trials and personal files. We will request advice from experts in the field. In addition, we will search associated articles from meetings, and contacted the authors of included trials, if need.

Main outcome(s) percentage change from baseline in LDL cholesterol level.

Quality assessment / Risk of bias analysis We evaluated the methodological quality of the individual studies using the Cochrane risk of bias tool for RCTs.

Strategy of data synthesis For the continuous outcomes, mean differences (MD) and 95% CIs were estimated as effective. In this study, the unit of blood lipid was converted, and we defined p <0.05 as statistically significant.

Subgroup analysis None.

Sensitivity analysis We conducted sensitivity analyses to investigate the influence of a single study on the overall pooled estimate of each predefined outcome.

Country(ies) involved China.

Keywords Heterozygous familial hypercholesterolemia; Cardiovascular disease; PCSK9; LDL.

Contributions of each author
Author 1 - Lingnan Zhang.
Author 2 - Fang Zhang.
Author 3 - Xinwei Jia.
Author 4 - Junmin Xie.
Author 5 - Yeran Zhu.
Author 6 - Xiaozhe Zhou.
Author 7 - Chang Meng.