INPLASY

The association of proton pump inhibitors use and non-alcoholic fatty liver disease: a meta-analysis and Mendelian randomization

INPLASY202470077
doi: 10.37766/inplasy2024.7.0077
Received: 20 July 2024
Published: 20 July 2024

Huang, JY; Liu, Z.

Corresponding author:
Junyu Huang

hjyu5520@163.com

Author Affiliation:
Hui Ya Hospital of The First Affiliated Hospital, Sun Yat-sen University.

ADMINISTRATIVE INFORMATION

Support - None.

Review Stage at time of this submission - Preliminary searches.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY202470077

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 20 July 2024 and was last updated on 20 July 2024.

INTRODUCTION

Review question / Objective Our study is aimed to investigate the association of proton pump inhibitors use with non-alcoholic fatty liver disease through a meta-analysis and Mendelian randomization.

Condition being studied As a common drug for digestive diseases, proton pump inhibitors(PPIs) are widely used in clinic. However, PPIs use can bring many adverse effects. Recently, studies have shown PPIs use was associated with non-alcoholic fatty liver disease(NAFLD). However, the results of current studies are inconsistent. Therefore, we aim to further investigate the association of PPIs and NAFLD through a meta-analysis and Mendelian randomization.Proton pump inhibitors are currently widely used, but have been reported to have a variety of adverse reactions. Recently, several retrospective studies have investigated the relationship between proton pump inhibitors use and nonalcoholic fatty liver disease, but the results have been mixed. To further clarify the relationship, we conducted a meta-analysis and a Mendelian randomization study, a method to reduce the influence of confounders.

METHODS

Participant or population Adults who take proton pump inhibitor or not.

Intervention Proton pump inhibitors use.

Comparator No proton pump inhibitors use.

Study designs to be included Cohort, case-control, or cross-sectional studies.

Eligibility criteria Two reviewers will searche and reviewe the articles independently according to exclusion and inclusion criteria. If there is a disagreement between the two reviewers, the third reviewers will serve as an arbitrator. The data will be extracted and analyzed from the selected articles.

Information sources PubMed、Cochrane、Emabse.

Main outcome(s) The association of proton pump inhibitors use and non-alcoholic fatty liver disease.

Quality assessment / Risk of bias analysis Newcastle Ottawa score will be used to assess study quality.

Strategy of data synthesis Cochran Q test and I^2 statistic will be used to assess statistical heterogeneity.

Subgroup analysis We will perform subgroup analysis according to study population and the usage duration or drug dosage of proton pump inhibitors.

Sensitivity analysis A leave-one-out analysis.

Country(ies) involved China.

Keywords proton pump inhibitors; non-alcoholic fatty liver disease; meta-analysis; Mendelian randomization.

Contributions of each author

Author 1 - Junyu Huang.
Email: hjyu5520@163.com
Author 2 - Zan Liu.
Email: xiaozan5520@163.com