INPLASY PROTOCOL

Corresponding author:
Ziyue Liu

DrZiyueLiu@163.com

Author Affiliation:
Shaanxi Provincial People's Hospital,Yan'an University Medical School, Yan'an. China.

Support: **No.**

Review Stage at time of this submission: **Data extraction.**

Conflicts of interest:
We declare that we have no financial and personal relationships with other people or organizations that can inappropriately influence our work.

Remedial treatment for patients with Helicobacter pylori infection who failed in the first treatment： systematic review and network meta-analysis

Liu, Z[1]; Ma, D[2];Liu, G[3];Zhang, L[4].

Review question / Objective: Do different remedial treatments have different effects on patients with Helicobacter pylori infection who have failed initial treatment? What about adverse reactions?

Rationale: From the perspective of the global Helicobacter pylori prevalence, by 2015, about 4.4 billion people worldwide were infected with Helicobacter pylori more than half of the world's population, and there are big differences between regions. And with the occurrence of drug resistance, the eradication of Helicobacter pylori has failed. At present, the detection of drug resistance is not common, so the choice of remedial treatment options is very important for patients with persistent Helicobacter pylori infection.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 11 September 2020 and was last updated on 11 September 2020 (registration number INPLASY202090048).

INTRODUCTION

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Condition being studied: Helicobacter pylori infection.

METHODS

Search strategy: We will conduct a literature search to identify all published RCTs in both Chinese and English. We will search the following electronic databases: CNKI, Wanfang, VIP, CBM, PubMed, Cochrane, Embase, etc.

Participant or population: Adult patients (18 years or older) who have failed the initial eradication of Helicobacter pylori and have not taken antibiotics, bismuth or proton pump inhibitors in the first 4 weeks.

Intervention: Different remedial treatment options.

Comparator: Other remedial treatment options.

Study designs to be included: We will include evaluation of the eradication rate of patients with Helicobacter pylori infection who failed the initial treatment with different remedial treatments, as well as the rate of good drug response and drug dependence rate.

Eligibility criteria: Patients with Helicobacter pylori infection who failed initial treatment; positive results of rapid urease test and histology, positive results of urea breath test or positive culture test.

Information sources: We will search the following electronic databases: CNKI, Wanfang, VIP, CBM, PubMed, Cochrane, Embase, etc.

Main outcome(s): Eradication of patients with persistent Helicobacter pylori infection after initial treatment failure under different treatment methods.

Additional outcome(s): Adverse reactions and dependence of patients with persistent Helicobacter pylori infection after initial treatment failure under different treatment methods.

Data management: By importing the found related documents into EndNote and other related software, by reading the title, abstract and full text of the document, screening and selecting effective research.

Quality assessment / Risk of bias analysis: Two reviewers assessed the quality of each study and evidence using Cochrane Risk of Bias tool and GRADE (Grading of Recommendations Assessment, Development, and Evaluation) guide, respectively. A third reviewer was consulted when there was a disagreement.

Strategy of data synthesis: Use Graphpad software to draw a screening flow chart. Literature quality evaluation Jadad scale or Cochrane risk bias assessment tool. Finally, extract the data and analyze the data and express the results through STATA and RevMan software.

Subgroup analysis: Different countries and regions or different time periods.

Sensibility analysis: We will also conduct sensitivity analyses based on study quality, and will use stratified meta-analyses to explore heterogeneity in effect estimates according to: study quality; study populations; the logistics of intervention provision; and intervention content.

Language: Chinese and English.

Country(ies) involved: China.

Keywords: Helicobacter pylori, network meta-analysis, remedial treatment.

Dissemination plans: **We will publish the research results.**

Contributions of each author:
Author 1 - Ziyue Liu.
Author 2 - Dongrui Ma.
Author 3 - Guisheng Liu.
Author 4 - Lingjuan Zhang.