# INPLASY PROTOCOL

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Conflicts of interest: None.

# Effectiveness and safety of proton pump inhibitors for treating acute pancreatitis A protocol for a systematic review and meta-analysis

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**Review question / Objective:** P: Patients with acute pancreatitis; I: with PPI; C: Treat without PPI; O: Hospital mortality and duration of hospital stays; S: RCTs.

Condition being studied: Proton pump inhibitors (PPI) is used to treat acute pancreatitis in China. But at present, there is no systematic evaluation report on its therapeutic effectiveness and safety. This protocol aims to reveal the efficacy and safety of PPI for treating acute pancreatitis.

Information sources: We will search the EMBASE, Web of Knowledge, PubMed, ClinicalTrials.gov and Cochrane Library from inception to June 30, 2021 to retrieve relevant studies. We will also search citations of relevant primary and review. Authors of abstract in the meeting will be further searched in PubMed for potential full articles. To minimize the risk of publication bias, we will conduct a comprehensive search that included strategies to find published and unpublished studies.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 15 January 2021 and was last updated on 15 January 2021 (registration number INPLASY202110048).

## INTRODUCTION

**Review question / Objective:** P: Patients with acute pancreatitis; I: with PPI; C: Treat without PPI; O: Hospital mortality and duration of hospital stays; S: RCTs. **Condition being studied:** Proton pump inhibitors (PPI) is used to treat acute pancreatitis in China. But at present, there is no systematic evaluation report on its therapeutic effectiveness and safety. This protocol aims to reveal the efficacy and safety of PPI for treating acute pancreatitis.

#### **METHODS**

Participant or population: Patient age  $\geq 18$  years old, a minimum hospital stays of 24 h and a diagnosis of AP.

Intervention: Treat with PPI.

**Comparator: Treat without PPI.** 

Study designs to be included: RCT.

Eligibility criteria: The inclusion criteria for the study will include: (1) studies with patient age  $\geq 18$  years old, a minimum hospital stay of 24 h and a diagnosis of AP; (2) conference abstracts were only included when they provided adequate relevant information for assessment; (3) the patients with AP was divided into two groups (treated with PPI or without PPI); Exclusion criteria will include: age <18 years old, patients with chronic pancreatitis or pancreas carcinoma and patients with incomplete data.

Information sources: We will search the EMBASE, Web of Knowledge, PubMed, ClinicalTrials.gov and Cochrane Library from inception to June 30, 2021 to retrieve relevant studies. We will also search citations of relevant primary and review. Authors of abstract in the meeting will be further searched in PubMed for potential full articles. To minimize the risk of publication bias, we will conduct a comprehensive search that included strategies to find published and unpublished studies.

Main outcome(s): Hospital mortality.

Additional outcome(s): Duration of hospital stays.

Quality assessment / Risk of bias analysis: Risk of bias assessment will be carried out according to the Newcastle-Ottawa Scale (NOS) to rate the internal validity of the individual studies, and funnel plots will be constructed to assess the risk of publication bias.

Strategy of data synthesis: All pairwise meta-analytic calculations will be performed with Review Manager software (RevMan) version 5.3 (Cochrane Collaboration). Heterogeneity will be examined by computing the Q statistic and I<sup>2</sup> statistic, and presence of reporting bias by visual inspection of funnel plots. Statistical significance was considered when the P value <0.05.

Subgroup analysis: AP patients treated with PPI and AP patients treated without PPI.

Sensibility analysis: Heterogeneity will be examined by computing the Q statistic and I<sup>2</sup> statistic, and presence of reporting bias by visual inspection of funnel plots. Statistical significance was considered when the P value <0.05.

Country(ies) involved: All the countries involved.

Keywords: acute pancreatitis; PPI; Traditional Chinese medicine; prognosis; mortality.

### **Contributions of each author:**

Author 1 - Tao Cheng. Author 2 - Bo-Fu Liu. Author 3 - Tian-Yong Han. Author 4 - Pan Pan. Author 5 - Jun-Zhao Liu. Author 6 - Haifang Yu.