

# INPLASY PROTOCOL

To cite: Wang et al. Effect of anti-helicobacter pylori treatment on coronary atherosclerotic heart disease: A protocol for systematic review and meta-analysis. Inplasy protocol 202210125. doi: 10.37766/inplasy2022.1.0125

Received: 26 January 2022

Published: 26 January 2022

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**Support:** NA.

**Review Stage at time of this submission:** Preliminary searches.

**Conflicts of interest:**  
None declared.

## Effect of anti-helicobacter pylori treatment on coronary atherosclerotic heart disease: A protocol for systematic review and meta-analysis

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**Review question / Objective:** To evaluate the effect of anti-helicobacter pylori treatment on coronary atherosclerotic heart disease.

**Condition being studied:** (1) Age  $\geq$  18; (2) patients with coronary atherosclerotic heart disease, divided into treatment and observation groups based on whether they received anti-H. pylori treatment, (3) included subjects with consistent baseline, except for whether they received anti-H. pylori treatment.

**Information sources:** PubMed, Cochrane Library, EMBASE, CNKI, Wanfang, CBM and VIP databases.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 26 January 2022 and was last updated on 26 January 2022 (registration number INPLASY202210125).

### INTRODUCTION

**Review question / Objective:** To evaluate the effect of anti-helicobacter pylori treatment on coronary atherosclerotic heart disease.

**Condition being studied:** (1) Age  $\geq$  18; (2) patients with coronary atherosclerotic heart disease, divided into treatment and observation groups based on whether they

received anti-H. pylori treatment, (3) included subjects with consistent baseline, except for whether they received anti-H. pylori treatment.

### METHODS

**Participant or population:** People diagnosed with coronary atherosclerotic heart disease with H. pylori infection

regardless of gender, age, nationality or ethnicity.

**Intervention:** Anti-*Helicobacter pylori* treatment combined with conventional treatment for coronary atherosclerotic heart disease or conventional treatment for coronary atherosclerotic heart disease without anti-*Helicobacter pylori* treatment.

**Comparator:** The control group were Patients with coronary atherosclerotic heart disease who were treated with anti-*Helicobacter pylori*. The observation group were Patients with coronary atherosclerotic heart disease who were not treated with anti-*Helicobacter pylori*.

**Study designs to be included:** All randomized controlled trials (RCTs) that evaluated the effect of anti-*helicobacter pylori* treatment on coronary atherosclerotic heart disease will be included.

**Eligibility criteria:** According to the purpose of this study, all published studies on anti-*H. pylori* treatment for coronary atherosclerotic heart disease will be included in the database.

**Information sources:** PubMed, Cochrane Library, EMBASE, CNKI, Wanfang, CBM and VIP databases.

**Main outcome(s):** Triglycerides (TG), total cholesterol (TC), low-density lipoprotein (LDL-C), high-density lipoprotein (HDL-C), homocysteine (HCY), super-sensitive C-reactive protein (hs-CRP), fibrinogen (FIB), Von willebrand factor (VWF).

**Quality assessment / Risk of bias analysis:** To assess the risk of bias for all included studies, Cochrane Collaboration's bias risk tool will be used by two independent review authors to assess the following areas: random sequence generation, allocation concealment, blindness to participants, people, and results, incomplete outcome data, optional reporting, and other biases. Any discrepancies in the deviation risk

assessment will be resolved through discussion. Ultimately, the quality of the studies will be divided into three levels: low risk of bias, high risk of bias, and unclear risk of bias.

**Strategy of data synthesis:** All analyses will be conducted by using RevMan software (V5.4). We will select fixed effects model or random effects model to merge the outcome indicators in accordance with the results of heterogeneity test. The fixed effects model will be applied for data synthesis of low heterogeneity ( $I^2 < 50\%$ ) while the random effects model will be conducted if the heterogeneity is significant ( $I^2 \geq 50\%$ ). It is considered that differences are statistically significant if the results of Z test show that P value is less than 0.05, and the 95% CI does not contain 0 (for continuous variables) or the 95% CI does not contain 1 (for dichotomous variables).

**Subgroup analysis:** We will conduct subgroup analysis based on gender, age, angina grading, whether or not coronary intervention was performed and other reasons. Subgroup analysis is also an effective way to explore the source of heterogeneity.

**Sensitivity analysis:** At the same time, we use sensitivity analysis to resolve heterogeneity and explain some problems.

**Language:** Chinese and English.

**Country(ies) involved:** China.

**Keywords:** anti-*helicobacter pylori*; coronary atherosclerotic heart disease; meta-analysis; systematic review; protocol.

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