

INPLASY PROTOCOL

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None declared.

Acupuncture for Enhancing Recovery of Gastrointestinal Function in Postoperative Patients with Gastric Cancer: A Systematic Review and Meta-Analysis of Randomized Controlled Trials

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Review question / Objective: In the present study, RCTs analyzing acupuncture for enhancing recovery of gastrointestinal function in postoperative patients with GC were identified and evaluated for their efficacy and safety using the Cochrane assessment method. The results of this study will provide evidence to support the clinical application of acupuncture treatment.

Condition being studied: Gastric cancer (GC) is a very common disease worldwide and the fifth most common cause of cancer and the fourth most frequent cause of cancer death, with 1.09 million new cases of gastric cancer and 500,000 deaths due to gastric cancer in 2020. About half of all GC cases worldwide occur in East Asia, notably China. China has a high incidence of gastric cancer, and its morbidity and mortality occupy the third place, which is a serious threat to the health of the Chinese people. Surgical resection is the main treatment of gastric cancer, but it might associate with severe postoperative gastrointestinal symptoms. The operation will cause great trauma to the patients with gastric cancer, accelerate the decomposition and metabolism of the patients, and further reduce the prognosis and quality of life of the patients. Prevention and treatment of postoperative intestinal paralysis and promotion of postoperative intestinal adaptation are the key issues of postoperative recovery.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 06 May 2021 and was last updated on 06 May 2021 (registration number INPLASY202150024).

INTRODUCTION

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METHODS

Participant or population: Gastric cancer patients who had radical gastrectomy. We do not apply any restrictions in terms of age, gender, and ethnicity.

Intervention: Traditional acupuncture, electroacupuncture, TENS, TEAS.

Comparator: Western medicine routine treatment (including mechanical intestinal preparation before operation, routine fasting after operation, routine indwelling abdominal drainage tube after operation, etc.)

Study designs to be included: RCTs on the effect of acupuncture on the recovery of gastrointestinal function in postoperative patients with gastric cancer will be included in this study.

Eligibility criteria: 1. Types of studies. RCTs on the effect of acupuncture on the recovery of gastrointestinal function in postoperative patients with gastric cancer will be included in this study. Retrospective studies, single arm studies, articles published in languages other than Chinese or English, conference reports, studies with only abstracts reported but no full texts, and case reports will be excluded. 2. Types of participants. Gastric cancer patients who had radical gastrectomy. We do not apply any restrictions in terms of age, gender, and ethnicity. 3. Types of interventions. The intervention measures of the treatment group include traditional acupuncture, electroacupuncture, TENS, TEAS, acupoint selection, needle retention time, and course of treatment are unlimited. In order to reduce interference factors, acupuncture combined with oral traditional Chinese medicine was excluded. The intervention measures in the control group included blank control and western medicine routine treatment (including mechanical intestinal preparation before operation, routine fasting after operation, routine indwelling abdominal drainage tube after operation, etc.). 4. Outcomes. The primary outcomes of this study will be the first exhaust and defecation time, and the time when bowel sounds returned to normal after operation. The secondary outcomes will be postoperative complication.

Information sources: We have searched candidate studies to evaluate the effect of acupuncture on the recovery of gastrointestinal function in postoperative patients with GC through PubMed, Embase, the Cochrane Library, China National Knowledge Infrastructure (CNKI), Chinese Biomedical Literature Database (CBM), China Science and Technology Journal Database (VIP) and Wanfang Database until April 2021.

Main outcome(s): The primary outcomes of this study will be the first exhaust and defecation time, and the time when bowel sounds returned to normal after operation.

Additional outcome(s): The secondary outcomes will be postoperative complication.

Author 5 - Lisha Chen.
Author 6 - Hengyi Zhang.

Quality assessment / Risk of bias analysis:

There may be biases in clinical trials from selecting and assigning subjects, implementing interventions, following up matters, and measuring and reporting findings at every stage. Thus, RCTs will be evaluated using the bias risk assessment tool (Cochrane Handbook for Systematic Reviews of Interventions). It includes the following six items: random sequence generation, allocation concealment, blinding of participants, caregivers, outcome assessors, incomplete outcome data, selective outcome reporting, and other bias. According to each study's results, the two researchers made 'low-risk' 'high-risk' or 'unclear risk' assessment of the above six items independently. If the two researchers have different opinions, the objection will be decided by the third reviewer.

Strategy of data synthesis: The risk ratio (RR) and its 95% confidence intervals (CIs) will be used as dichotomous variables. Continuous variables were statistically analyzed using weighted mean difference (WMD) or standardized mean difference (SMD) and its 95% CIs.

Subgroup analysis: If the heterogeneity source cannot be found after sensitivity analysis, we will perform further subgroup analysis.

Sensitivity analysis: We will use the leave-one-out method for sensitivity analysis to judge the stability of outcome indicators.

Country(ies) involved: China.

Keywords: acupuncture; gastric cancer; gastrointestinal dysfunction; systematic review; Meta-analysis.

Contributions of each author:

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Author 2 - Ping Zhang.
Author 3 - Ziyi Hu.
Author 4 - Ying Yi.