INPLASY PROTOCOL

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Review Stage at time of this submission: The review has not yet started.

Conflicts of interest:
None.

Acupuncture in preventing postoperative complications in laparoscopic cholecystectomy：A protocol for systematic review and meta-analysis

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Review question / Objective: Can acupuncture therapy help prevent postoperative complications in laparoscopic cholecystectomy?

Condition being studied: Laparoscopic cholecystectomy is a common type of surgical procedure. However, postoperative pain, discomfort of shoulder and back, postoperative nausea and vomiting and other complications seriously affect the postoperative recovery quality of patients. Acupuncture is a worldwide-use method complementary and alternative method, and some studies have showed its application in preventing postoperative complications in laparoscopic cholecystectomy but the effect of acupuncture is still unclear. Thus, we decide to make a meta-analysis to solve it.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 25 November 2020 and was last updated on 25 November 2020 (registration number INPLASY2020110109).

INTRODUCTION

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METHODS

Participant or population: patients who underwent laparoscopic cholecystectomy.

Intervention: Any acupuncture therapy will be included, for instance, acupuncture, electro-acupuncture and moxibustion, transcutaneous electric nerve stimulation and acupressure.

Comparator: Placebo.

Study designs to be included: Randomized control trials.

Eligibility criteria: Peer-reviewed randomized control trails will be eligible for inclusion. And language will be restricted to English and Chinese.

Information sources: PubMed, Cochrane library, Web of Science, Embase, China National Knowledge Infrastructure, Wanfang Database, VIP Database, and China Biology Medicine disc.

Main outcome(s): (1) postoperative pain; (2) postoperative nausea and vomiting.

Additional outcome(s): (1) assumption of analgetic; (2) assumption of antiemetics; (3) safety of acupuncture.

Quality assessment / Risk of bias analysis: Cochrane risk-of-bias tool (ROB 2.0) will be used to evaluate the quality.

Strategy of data synthesis: Only 3 or more studies reported the same outcome will be conducted in meta-analysis by Stata 14.0. Risk ratio (RR) with 95% confidence interval (CI) and standard mean difference (SMD) with the 95% CI will be adopted to calculate dichotomous variables and continuous variables, respectively. Heterogeneity is quantified with the I-square statistic. When I-square > 50%, a random effect model will be performed, otherwise a fixed effect model will be performed. And before selecting model, sensitivity analysis will be accomplished if sufficient studies are available. When pairwise comparison studies ≥10, a Begg's testing will be performed to explore the publication bias.

Subgroup analysis: Subgroup analysis and regression analysis will be conducted if reasonable such as acupuncture regimens, publication year.

Sensibility analysis: Before selecting model, sensitivity analysis will be accomplished if sufficient studies are available and necessary.

Country(ies) involved: China.

Keywords: laparoscopic cholecystectomy, acupuncture, meta-analysis, postoperative pain, postoperative nausea and vomiting

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