

# INPLASY

## Acupuncture anesthesia combined with general anesthesia in laparoscopic surgery: a meta-analysis

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### ADMINISTRATIVE INFORMATION

**Support** - None.

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

**Conflicts of interest** - None declared.

**INPLASY registration number:** INPLASY202380013

**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 02 August 2023 and was last updated on 02 August 2023.

### INTRODUCTION

**Review question / Objective** The purpose of this systematic review is to compare the efficacy and safety of acupuncture anesthesia combined with general anesthesia and general anesthesia alone in laparoscopic surgery in order to provide better information for clinical practice.

**Condition being studied** Laparoscopic surgery is a common type of surgery because of the use of intraoperative carbon dioxide pneumoperitoneum, which frequently causes postoperative vital sign changes and postoperative pain in patients under general anesthesia.

### METHODS

**Search strategy** PubMed, EMBASE, The Cochrane Library, Web of Science, China National Knowledge Infrastructure, China Biology Medicine disc (CBMdisc), Wanfang Database, and China Science and Technology Journal Database (VIP)

were searched to Collection of randomized controlled studies with acupuncture anesthesia combined with general anesthesia after laparoscopy. Search terms included 'acupuncture', 'acupuncture anesthesia', 'randomized controlled trial', and due to the differences between the English and Chinese databases, the search terms in the Chinese database were translations or synonyms of the above terms.

**Participant or population** Laparoscopic criteria were met. (No age, gender, occupation, race, or case source restrictions).

**Intervention** A type of RCT will be included: the experimental group will be treated with acupuncture anesthesia combined with general anesthesia and the control group will receive general anesthesia.

**Comparator** The experimental group was anesthetized with acupuncture anesthesia combined with general anesthesia, and the control group was anesthetized with general anesthesia.

**Study designs to be included** RCTs.

**Eligibility criteria** The language is limited to Chinese and English. Others such as randomized crossover trials, animal trials, medical cases, Non-RCTs, and only published in the form of abstracts will be excluded.

**Information sources** PubMed, EMBASE, The Cochrane Library, Web of Science, China National Knowledge Infrastructure, China Biology Medicine disc(CBMdisc), Wanfang Database and China Science and Technology JournalDatabase(VIP).

**Main outcome(s)** Anesthesia effects, safety, efficacy, adverse reactions.

**Data management** After using NoteExpress to exclude repetitive literature 2 researchers will independently read the title and abstract conduct a preliminary screening based on the inclusion criteria, and then check the full text to determine whether it will be included. If there is any disagreement further discussion and verification will be conducted, or the third researcher will assist in the resolution.

**Quality assessment / Risk of bias analysis** For literature quality assessment the Cochrane-recommended risk of bias assessment tool was used to assess the quality and risk of bias of all included literature. The assessment include: sequence generation; allocation concealment; blinding of participants, personnel, and outcome assessors; incomplete outcome data; selective outcome reporting; other sources of bias. The methodological quality of the included studies was evaluated according to the "Risk of Bias Assessment Tool" in the Cochrane Collaboration.

**Strategy of data synthesis** X<sup>2</sup> test was used to test the heterogeneity among the literature results, stata16 software was used for statistical analysis Randomized controlled trial for binary classification variables, using the relative risk(relative risk,RR)and 95% confidence interval(confidence interval,CI) evaluation effect; For continuous variables, mean difference(MD) and 95% confidence interval(CI) were used to assess the effect size. The results of data analysis are represented by forestplots.

**Subgroup analysis** If the test result was  $P > 0.1$  and  $I^2 < 50\%$ , it was judged that there was no heterogeneity and the fixed effect model was used for meta-analysis; If  $P \leq 0.1$  and  $I^2 \geq 50\%$ , the random effects model was used for the

meta-analysis. Subgroup analyses were performed to eliminate any heterogeneity.

**Sensitivity analysis** Sensitivity analyses were performed by forest plots, funnel plots, bias tests.

**Country(ies) involved** China.

**Keywords** acupuncture anesthesia, laparoscopic surgery, randomized controlled trial; meta-analysis.

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

Author 1 - Ji Quan - literature search and screening and manuscript writing.

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