INTRODUCTION

Review question / Objective: Whether Zusanli (ST36) acupoint injection should be used in the chemotherapy-induced nausea and vomiting. How effective and safe is it?

Condition being studied: Chemotherapy-induced nausea and vomiting (CINV) are major adverse effects of cancer chemotherapy. Even the pathophysiology of CINV are not completely understood. They have seriously affected the patients quality of life. Acupoint injection is a new type of disease prevention and treatment method that combines the characteristics of traditional acupuncture and modern drug injection. It originated in the 1950s like electroacupuncture. After more than 60 years of development, it has now been applied to most diseases that are suitable for acupuncture therapy. Zusanli (ST36) is the main acupoint for acupuncture treatment of nausea and vomiting. And now a lot of clinical researches have focused on Zusanli (ST36) acupoint injection for chemotherapy-induced nausea and vomiting. However, there is no systematic review and meta-analysis has been conducted.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 08 October 2020 and was last updated on 08 October 2020 (registration number INPLASY2020100024).

Zusanli (ST36) acupoint injection for chemotherapy-induced nausea and vomiting: a systematic review and meta-analysis of randomized clinical trials

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INPLASY PROTOCOL

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the main acupoint for acupuncture treatment of nausea and vomiting. And now a lot of clinical researches have focused on Zusanli (ST36) acupoint injection for chemotherapy-induced nausea and vomiting. However, there is no systematic review and meta-analysis has been conducted.

**METHODS**

**Participant or population:** Patients with Chemotherapy-induced nausea and vomiting.

**Intervention:** Zusanli (ST36) acupoint injection.

**Comparator:** Control group.

**Study designs to be included:** randomized controlled trials (RCTs).

**Eligibility criteria:** Effectiveness and safety.

**Information sources:** We searched for studies in the following electronic database: PubMed, EMBASE, Cochrane Library, Web of Science, and China Biomedical Literature (CBM), China National Knowledge Infrastructure (CNKI), Chinese Scientific Journals Database (VIP), and Wanfang database, from the time when the database establishment to September 2020, in order to collect randomized controlled trials (RCTs) on Zusanli (ST36) acupoint injection in the treatment of chemotherapy-induced nausea and vomiting. The search was limited to human studies and had no language restrictions.

**Main outcome(s):** Systematically review the effect of Zusanli (ST36) acupoint injection on chemotherapy-induced nausea and vomiting.

**Quality assessment / Risk of bias analysis:** For the quality evaluation of the included literature, we use the Jadad rating scale to evaluate.

**Strategy of data synthesis:** We will use standard data extraction methods for data extraction. The basic information, sample characteristics, intervention measures, outcome indicators and other data included in the article were extracted independently by two reviewers. If there is any inconsistency, a third person will decide. The data will be analyzed by means and standard deviations, using RevMan5.3 software to derive standard mean deviations with 95% confidence intervals (SMD). The heterogeneity of the data will be tested by calculating the I² value. If I²<50%, the heterogeneity is considered to be small and the fixed effects model is adopted. If I²>50%, it is considered that there is significant heterogeneity, and the random effects model is used to evaluate the effect size of the study.

**Subgroup analysis:** The difference between acute and delayed onset of nausea and vomiting caused by chemotherapy and the difference between the drugs used for Zusanli acupoint injection may lead to heterogeneity, so we used these possible influencing factors for subgroup analysis.

**Sensibility analysis:** If necessary, we will take the exclusion of low-quality research, use different model analysis, use different statistical methods to carry out sensitivity analysis to ensure the robustness of the research results.

**Language:** No restriction.

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

**Keywords:** chemotherapy-induced nausea and vomiting, Zusanli (ST36) acupoint injection, systematic review, meta-analysis.

**Contributions of each author:**
- Author 1 - Jialiang Li - description of results and writing of the article.
- Author 2 - Weihong Li - Funding acquisition, description of results and writing of the article.
- Author 3 - jiexin Wang - data fetch and Software application.
- Author 4 - ke Zhu - Search Strategies.
- Author 5 - zhihui Zhao - data fetch and Software application.