

INPLASY PROTOCOL

To cite: Chen et al. The Efficacy of acupressure for nausea and vomiting during pregnancy: A systematic review and meta-analysis. Inplasy protocol 202140147. doi: 10.37766/inplasy2021.4.0147

Received: 30 April 2021

Published: 30 April 2021

Corresponding author:
Quanjun Lyu

lvquanjun666@163.com

Author Affiliation:
Department of Nutrition and Food Hygiene, College of Public Health, Zhengzhou University, China.

Support: NSFC 81673165 and 81602852.

Review Stage at time of this submission: Formal screening of search results against eligibility criteria.

Conflicts of interest:
None declared.

INTRODUCTION

Review question / Objective: This meta-analysis aims to explore the effect of acupressure in the treatment of nausea and

The Efficacy of acupressure for nausea and vomiting during pregnancy: A systematic review and meta-analysis

Chen, X¹; Zhang, H²; Hu, Y³; Amoah, AN⁴; Fu, R⁵; Qiu, Y⁶; Cao, Y⁷; Liu, Y⁸; Lyu, Q⁹.

Review question / Objective: This meta-analysis aims to explore the effect of acupressure in the treatment of nausea and vomiting during pregnancy (NVP) compared with control. **Eligibility criteria:** Articles included should meet all the following criteria: (1) the effect of intervention and control group in treating NVP was concerned; (2) designed as RCT; (3) outcomes were about changes in NVP symptoms or changes in NVP scores (defined as the number of patients with NVP increased or decreased or the NVP symptom score increased or decreased in pregnant women). (4) sufficient data for estimating the odds ratios (ORs) or standardized mean difference (SMD) of the NVP; (5) the full text is available.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 30 April 2021 and was last updated on 30 April 2021 (registration number INPLASY202140147).

vomiting during pregnancy (NVP) compared with control.

Condition being studied: Nausea and vomiting during pregnancy. We identified 13,192 articles from the electronic

databases (i.e., PubMed, Web of Science, Embase, CNKI and WANFANG) and 1 article from the reference list of other systematic review. After removing duplicate and unsuitable papers, 16 articles were included. However, there was only one study compared the effect of acupressure with ginger. Therefore, the effect of acupressure compared with ginger cannot be analysed in this meta-analysis. Finally, a total of 16 RCTs involving 2008 participants were included in our work. Among them, 10 studies showed their results with continuous variables, and the rest presented as binary variables, and the meta-analysis was divided into two parts based on this.

METHODS

Search strategy: The electronic databases PubMed, Web of Science, Embase, CNKI and WANFANG were searched to identify eligible studies prior to January 20, 2021. The following keywords were used: “acupressure” and “nausea” or “vomiting” and “pregnancy”. Furthermore, we searched the reference lists of all relevant research papers and reviews to identify additional eligible studies.

Participant or population: Pregnant women who suffer from nausea and vomiting will be included.

Intervention: Acupressure at the Neiguan Point was the main intervention.

Comparator: Acupressure at placebo point was the main comparator.

Study designs to be included: Randomized controlled trials will be included.

Eligibility criteria: Articles included should meet all the following criteria: (1) the effect of intervention and control group in treating NVP was concerned; (2) designed as RCT; (3) outcomes were about changes in NVP symptoms or changes in NVP scores (defined as the number of patients with NVP increased or decreased or the NVP symptom score increased or decreased in pregnant women). (4) sufficient data for

estimating the odds ratios (ORs) or standardized mean difference (SMD) of the NVP; (5) the full text is available.

Information sources: The electronic databases PubMed, Web of Science, Embase, CNKI and WANFANG were searched. Furthermore, we searched the reference lists of all relevant research papers and reviews to identify additional eligible studies.

Main outcome(s): There were 9 studies were conducted in Asia, 4 conducted in Europe, and 3 conducted in North America. The sample size of participants ranged from 16 to 450. The gestation weeks and age varied from 0 to 37 weeks and 18 to 35 years, respectively. The duration of intervention was mostly three to four days. The outcome measurements consisted of the Rhodes Index, Linkert Scale, visual analogue scale (VAS), and self-report.

Quality assessment / Risk of bias analysis: The methodologic quality of eligible RCTs were evaluated by two reviewers independently by using the Cochrane Risk Assessment Tool.

Strategy of data synthesis: The Mantel Haenszel method was used to combine the improvement ratio of NVP, and measures of effect were presented as ORs with 95% confidence intervals (CIs). The mean difference (MD) for net change with 95% CI was adopted to evaluate the effect of acupressure or control measures on NVP.

Subgroup analysis: At present, subgroup analyses could not be implemented in each comparison because of the limitation of sample size.

Sensitivity analysis: The Q test and I-square test were used to assess heterogeneity, with P value of Q test ≤ 0.1 and/or $I^2 > 50\%$ representing high heterogeneity, and the random-effect model was selected. The source of heterogeneity was also explored by performing meta-regression. If no significant covariates were found to be heterogeneous, we conducted the “leave-one-out” sensitive analysis to assess the

key studies which has substantial impact on between-study heterogeneity.

Country(ies) involved: China and Ghana.

Keywords: Acupressure; Nausea and vomiting during pregnancy; Pregnancy; Meta-analysis.

Contributions of each author:

Author 1 - Xi Chen searched and reviewed all articles, extracted and analysed data, drafted and revised the manuscript.

Email: 32921124@qq.com

Author 2 - Han Zhang searched and reviewed all articles, extracted and analysed data, drafted and revised the manuscript.

Author 3 - Youchun Hu optimized the study design.

Email: hyc137819@163.com

Author 4 - Adwoa N. Amoah assisted in the revision of the manuscript.

Email: adwoason@gmail.com

Author 5 - Rong Fu resolved disagreements.

Email: 13253619327@163.com

Author 6 - Yanfang Qiu optimized the study design.

Email: 18595372791@163.com

Author 7 - Yuan Cao resolved disagreements.

Email: cao_yuan79@163.com

Author 8 - Yanhua Liu assisted in the revision of the manuscript.

Email: liuyanhua1015@163.com

Author 9 - Quanjun Lyu designed this study.

Email: lvquanjun666@163.com