

The Efficacy and Safety of Acupotomy in The Treatment of The Third Lumbar Transverse Process Syndrome: A Systematic Review and Meta-Analysis

INPLASY202370109

doi: 10.37766/inplasy2023.7.0109

Received: 28 July 2023

Published: 28 July 2023

Corresponding author:

Min Song

songmin1995@163.com

Author Affiliation:

Shandong university of traditional chinese medicine.

Song, M¹; Cheng, W²; Xi, YT³.**ADMINISTRATIVE INFORMATION****Support** - None.**Review Stage at time of this submission** - Preliminary searches.**Conflicts of interest** - None declared.**INPLASY registration number:** INPLASY202370109**Amendments** - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 28 July 2023 and was last updated on 28 July 2023.**INTRODUCTION**

Review question / Objective The purpose of this study was to evaluate the efficacy and safety of acupotomy in the treatment of the third lumbar transverse process syndrome.

Condition being studied The third lumbar transverse process syndrome refers to the disease characterized by the third lumbar transverse process tenderness accompanied by chronic low back pain and lower limb pain due to long-term lumbar strain or long time of single posture. As a common and frequently-occurring disease, the third lumbar transverse process syndrome tends to be younger, especially in young adults. Relieving clinical symptoms is the primary problem to be solved by clinical workers. The incidence of this disease accounts for 1 / 3 ~ 1 / 2 of low back pain, and even reaches 50 % ~ 60 %. At present, the treatment methods of western medicine for this disease mainly include drug therapy, physical therapy (shock wave, pulse electrotherapy, etc.), local closure therapy, functional rehabilitation therapy and surgical treatment. Although the above

treatment schemes have quick effect, instant relief of pain and other discomfort symptoms, there are problems such as large adverse reactions of western medicine and repeated illness after drug withdrawal, patients ' dependence on a certain physical therapy, and high surgical costs. Needle knife surgery is in the non-visual state, through the fixed point, positioning, orientation and a certain approach directly into the body lesions, through the lesion site of the cutting, stripping, shoveling to achieve the release of adhesions, restore mechanical balance, to eliminate symptoms. In short, acupotomy therapy can overcome the shortcomings of long course of external drug treatment, and can also avoid the recurrence of local closure. It has the advantages of small trauma, stable and reliable curative effect, simple and safe operation, and is worthy of clinical promotion.

METHODS

Search strategy The following online databases will be comprehensively searched including: The Cochrane Library, PubMed, Embase, Web of

Science, Ovid, Scopus, ProQuest, Chinese Biomedical Literature Database (CBM), Chinese National Knowledge Infrastructure Database (CNKI), Chinese Science and Technique Journals Database (VIP), The Wanfang Database and Duxiu. All the literature retrieved is from the inception of the database to 31 July 2023. There are no language restrictions or regional restrictions. Missing literature information will be supplemented by contacting the original author. The retrieval is carried out by the combination of subject words and free words, and adjusted according to the characteristics of the database. The search terms were mainly : needle knife, small needle knife, needle knife therapy, third lumbar transverse process syndrome, etc.

Participant or population The subjects were patients with a definite diagnosis of the third lumbar transverse process syndrome, with no restrictions on gender, age, and other factors.

Intervention The experimental group was treated with acupotomy therapy.

Comparator The control group was treated with drug therapy or other non-needle knife therapy.

Study designs to be included All randomized controlled trials of acupotomy for the treatment of third lumbar transverse process syndrome will be included, regardless of language.

Eligibility criteria Inclusion criteria: 1, the included literature is a randomized controlled trial, any language can be. 2. Patients enrolled in the group have clear disease diagnostic criteria, regardless of race, gender and age. Exclusion criteria: 1, non-rct studies, animal experiments, reviews, etc. are not included in the study. 2, the use of acupuncture, massage and other non-needle knife treatment. 3, no clear diagnostic criteria or accompanied by other diseases. 4, repeated publication or incomplete basic information.

Information sources The following online databases will be comprehensively searched including: The Cochrane Library, PubMed, Embase, Web of Science, Ovid, Scopus, ProQuest, Chinese Biomedical Literature Database (CBM), Chinese National Knowledge Infrastructure Database (CNKI), Chinese Science and Technique Journals Database (VIP), The Wanfang Database and Duxiu. All the literature retrieved is from the inception of the database to 31 July 2023. There are no language restrictions or regional restrictions. Missing literature information

will be supplemented by contacting the original author.

Main outcome(s) The clinical efficacy and pain symptom improvement score were the main results.

Additional outcome(s) Secondary results mainly include TCM symptom scores and safety evaluation.

Data management Two researchers independently screened literatures, extracted data and cross-checked them. Disputes, if any, shall be resolved through discussion or consultation with a third party. In literature screening, the title should be read first, and the abstract and full text should be further read to determine whether to include or not after the exclusion of obviously irrelevant literature. If necessary, contact the original author by email or telephone to obtain information that is not identified but is important to this study. Data extraction includes: (1) Basic information of included studies: research title, first author, published journal, etc.; (2) Baseline characteristics and interventions of subjects; (3) Key elements of bias risk assessment; (4) Outcome indicators and outcome measurement data concerned.

Quality assessment / Risk of bias analysis Two researchers independently evaluated the risk of bias in the included studies and cross-checked the results. The RCT bias risk assessment tool recommended by Cochrane Journal 5.1.0 was used to assess the risk of bias.

Strategy of data synthesis The Review Manager 5.3 software was used to analyze the data. Relative risk (RR) and standardized mean difference (SMD) were used as effect sizes for counting data and measurement data respectively. 95% confidence intervals (CI) were used for calculation of both effect sizes. The chi-square test was used to analyze the heterogeneity of the research, if the heterogeneity is tiny ($P \geq 0.1$, $I^2 \leq 50\%$), then choose the fixed effects model, otherwise ($P < 0.1$, $I^2 > 50\%$), further analysis of sources of heterogeneity is necessary. After ruling out the influence of the clinical heterogeneity, random effects model for Meta analysis can be used.

Subgroup analysis If there is significant heterogeneity between studies, subgroup analysis will be performed on patients of different ages and genders.

Sensitivity analysis Furthermore, if necessary, a sensitivity analysis will be performed.

Country(ies) involved China.

Keywords Acupotomy ; The Third Lumbar Transverse Process Syndrome; efficacy and safety ; Systematic review; Meta-analysis.

Contributions of each author

Author 1 - Min Song.

Email: songmin1995@163.com

Author 2 - wen cheng.

Email: 1711281838@qq.com

Author 3 - yutan xi.