

# INPLASY PROTOCOL

To cite: Jiang et al. Ultrasound-guided needle-knife for De Quervain's disease A protocol for systematic review and meta-analysis. Inplasy protocol 202110094. doi: 10.37766/inplasy2021.1.0094

Received: 24 January 2021

Published: 24 January 2021

## Corresponding author:

Li Jiang

55522960@qq.com

## Author Affiliation:

Jiangxi University of  
Traditional Chinese Medicine

**Support:** GJJ201238.

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

## Conflicts of interest:

The authors have no conflicts of interest to disclose.

## Ultrasound-guided needle-knife for De Quervain's disease A protocol for systematic review and meta-analysis

Jiang, L<sup>1</sup>; Liu, XM<sup>2</sup>; Li, HY<sup>3</sup>; Jiang, JW<sup>4</sup>.

**Review question / Objective:** Ultrasound-guided needle-knife for De Quervain's disease.

**Condition being studied:** De Quervain's disease is a kind of aseptic inflammation caused by repeated frictions of tendons in the tendon sheath of the styloid process of the radius. The main symptoms are protuberance and pain of the styloid process of the radius, accompanied by aggravation of pain during the movement of the wrist and thumb. At present, the main clinical treatment includes conservative treatment and surgical treatment. The advantages of needle-knife are simple operation, obvious therapeutic effect and high safety. It can also be used to treat De Quervain's disease. Ultrasound gives a precise visualization of the thickness. The purpose of this study is to evaluate the efficacy and safety of ultrasound-guided needle-knife in the treatment of De Quervain's disease and to provide the latest basis for clinical application.

**INPLASY registration number:** This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 24 January 2021 and was last updated on 24 January 2021 (registration number INPLASY202110094).

## INTRODUCTION

**Review question / Objective:** Ultrasound-guided needle-knife for De Quervain's disease.

**Condition being studied:** De Quervain's disease is a kind of aseptic inflammation caused by repeated frictions of tendons in

the tendon sheath of the styloid process of the radius. The main symptoms are protuberance and pain of the styloid process of the radius, accompanied by aggravation of pain during the movement of the wrist and thumb. At present, the main clinical treatment includes conservative treatment and surgical treatment. The advantages of needle-knife

are simple operation, obvious therapeutic effect and high safety. It can also be used to treat De Quervain's disease. Ultrasound gives a precise visualization of the thickness. The purpose of this study is to evaluate the efficacy and safety of ultrasound-guided needle-knife in the treatment of De Quervain's disease and to provide the latest basis for clinical application.

## METHODS

**Participant or population:** All the patients included in the study were diagnosed with De Quervain's disease, regardless of age, sex, race and course of disease.

**Intervention:** The treatment group was treated with ultrasound-guided needle-knife, which was not limited by acupoint selection, operation method, acupuncture material, needle retention time, course of treatment and so on.

**Comparator:** There was no restriction of intervention in the control group. Studies of ultrasound-guided needle-knife and other treatments were included in this study if other treatments were used in the treatment group as well as in the control group.

**Study designs to be included:** All randomized controlled trials (RCT) on the ultrasound-guided needle-knife for De Quervain's disease will be included. Other designs, such as animal studies, case reports, reviews, and non-randomized controlled trials will be excluded. There are no restrictions on language and publication date.

**Eligibility criteria:** RCTs comparing two different types of acupuncture; ·Non-randomised controlled trials ·Duplicated data ·Invalid outcome indexes.

**Information sources:** We will search the following databases by computer: PubMed, Web of Science,, Cochrane Library, Cochrane Central controlled Trials Registry (CENTER), EMBASE, China National knowledge Infrastructure (CNKI), Wanfang

data, Chinese Biomedical Literature Database (CBM), VIP Database (VIP). Search from the establishment of the database to January 2021. Search for combinations of subject words and free words. Search terms include needle-knife, De Quervain's disease and randomization. There are no restrictions on language, country and population.

**Main outcome(s):** (1) pain intensity, such as visual analogue score (VAS); (2) wrist function, such as Cooney wrist score, Grattland and Werley wrist score, wrist function evaluation, etc.

**Additional outcome(s):** (1) wrist range of motion; (2) adverse events; (3) quality of life.

**Quality assessment / Risk of bias analysis:** In the aspect of inclusion of literature bias risk, Cochrane Collaboration's bias risk tool will be used to evaluate the quality of inclusion. It includes the following seven items: random sequence generation; allocation concealment; blinding of participants; blinding of outcome; incomplete outcome data; selective result report; and other sources of bias. All of the above projects will be evaluated independently by two researchers. If there are differences, we will resolve them by discussing or consulting a third researcher. The bias risk of each project is rated as low, high or unclear risk.

**Strategy of data synthesis:** We will use Revman5.3 software for statistical analysis. First of all, to judge whether there is statistical heterogeneity between the results, if there is statistical heterogeneity, the source of heterogeneity should be analyzed. After excluding the influence of obvious clinical heterogeneity, random-effects model should be used for meta-analysis. If not, the fixed-effects model is used for analysis. If there is significant clinical heterogeneity, subgroup analysis or sensitivity analysis are performed.

**Subgroup analysis:** Classifications are as follows: (1) different acupuncture methods

(2) different acupoints (3)different courses of treatment.

**Sensitivity analysis:** We will eliminate the "high-risk" low-quality articles for sensitivity analysis to judge the robustness of the results.

**Language:** Chinese and English.

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

**Keywords:** ultrasound-guided, needle-knife, De Quervain's disease, protocol, systematic review.

**Contributions of each author:**

Author 1 - Li Jiang - Conceptualization, Formal analysis , Methodology.

Email: 355522960@qq.com

Author 2 - Xiaomin Liu - Software, Conceptualization,Methodology, Data curation.

Email: 13807058668@163.com

Author 3 - Huaiyu Li - Formal analysis, Writing – original draft, Writing–review & editing.

Email: 1021504702@qq.com

Author 4 - Jiawang Jiang - Supervision, Writing – original draft, Writing–review & editing.

Email: 1137298371@qq.com