INPLASY PROTOCOL

Corresponding author:
Ke-Vin Chang

kvchang011@gmail.com

Author Affiliation:
Department of Physical Medicine and Rehabilitation, National Taiwan University Hospital, Bei-Hu Branch, Taipei, Taiwan

Review Stage at time of this submission: Preliminary searches.

Conflicts of interest: None declared.

Ultrasonography for the Diagnosis of Carpal Tunnel Syndrome: A Protocol for an Umbrella Review

Chang, KV[1].

Review question / Objective: To summarize the evidence from systematic reviews and meta-analyses for the use of ultrasound imaging to diagnose carpal tunnel syndrome.

Eligibility criteria: (1) reviews reporting at least one measurement using the following sonography modalities: B mode, sonoelastography, Doppler ultrasound, (2) enrollment of patients with carpal tunnel syndrome, (3) use of ultrasound imaging for the diagnostic purpose and (4) targeting on human studies.

Information sources: Systemic reviews and meta-analyses meeting the inclusion criteria were searched from PubMed, Embase, Medline, Web of Science and Cochrane. Reviews that do not complete a systematic literature search are excluded.

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 10 April 2022 and was last updated on 10 April 2022 (registration number INPLASY202240058).

INTRODUCTION

Review question / Objective: To summarize the evidence from systematic reviews and meta-analyses for the use of ultrasound imaging to diagnose carpal tunnel syndrome.

Condition being studied: Patients with carpal tunnel syndrome.

METHODS

Search strategy: The keywords used for literature search include "carpal tunnel syndrome", "median nerve", "entrapment neuropathy", "ultrasound", "ultrasonography", "sonography", "sonoelastography", "review", "systematic review" and "meta-analysis". The following algorithm is employed: ("carpal tunnel

syndrome" or "median nerve" or "entrapment neuropathy") and ("ultrasound" or" sonography" or "sonoelastography") and ("review" or "systematic review" or "meta-analysis").

Participant or population: Patients with carpal tunnel syndrome.

Intervention: Ultrasound imaging.

Comparator: Clinical symptoms, electrophysiological testing.

Study designs to be included: Reviews using a systematic way for literature search and meta-analyses.

Eligibility criteria: (1) reviews reporting at least one measurement using the following sonography modalities: B mode, sonoelastography, Doppler ultrasound, (2) enrollment of patients with carpal tunnel syndrome, (3) use of ultrasound imaging for the diagnostic purpose and (4) targeting on human studies.

Information sources: Systemic reviews and meta-analyses meeting the inclusion criteria were searched from PubMed, Embase, Medline, Web of Science and Cochrane. Reviews that do not complete a systematic literature search are excluded.

Main outcome(s): The result will include the ultrasound measurement parameters (ultrasound mode, probe placement and related cutoff value) and their respective diagnostic abilities. Recommendations from each review will also be documented.

Quality assessment / Risk of bias analysis: The methodological quality of the included articles will be assessed with the AMSTAR 2 (A Measurement Tool to Assess Systematic Reviews) critical appraisal tool independently by two authors.

Strategy of data synthesis: The extracted data will be narrated at the level of systematic reviews and meta-analyses.

Subgroup analysis: Not applicable.

Sensitivity analysis: Not applicable.

Language: No limitation of languages.

Country(ies) involved: Taiwan.

Keywords: carpal tunnel syndrome, median nerve, entrapment neuropathy, peripheral nerve, ultrasonography, sonoelastography, diagnostic imaging.

Contributions of each author:
Author 1 - Ke-Vin Chang.