INPLASY PROTOCOL

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None declared.

CC7 nerve transfer for cerebral injury induced upper limb paralysis: a meta-analysis

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Review question / Objective: **Whether the application of CC7 nerve transfer can lead to functional improvement in patients with upper limb spastic paralysis caused by cerebral injury was unclear.**
Condition being studied: **Many neuromodulatory strategies target upper limb paralysis caused by cerebral injury, including pharmacological interventions and neurostimulation. CC7 nerve transfer was first used to treat brachial plexus avulsion injuries, and its efficacy and safety in restoring upper limb function has been proven. Recently, this technique has been used in patients with cerebral injuries. Yet, there is no meta-analysis on the CC7 nerve transfer for upper limb functional restoration.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 05 June 2022 and was last updated on 04 December 2022 (registration number INPLASY202260016).

INTRODUCTION

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proven. Recently, this technique has been used in patients with cerebral injuries. Yet, there is no meta-analysis on the CC7 nerve transfer for upper limb functional restoration.

METHODS

Search strategy: Two investigators searched MEDLINE, Embase, the Cochrane Central Register of Controlled Trials (CENTRAL), and ClinicalTrials.gov for studies published up to May 01, 2022. The following keywords were used: c7, seventh nerve, and nerve transfer. The search strategy was limited to English-language articles.

Participant or population: Patients with upper limb paralysis after cerebral injury.

Intervention: CC7 nerve transfer.

Comparator: Rehabilitation only.

Study designs to be included: Randomized controlled trials.

Eligibility criteria: (1) study type: RCT; (2) language: published in English; (3) participants: patients with upper limb paralysis after cerebral injury for at least 1 year. (4) interventions: CC7 nerve transfer; (5) outcomes: change in UEFM score, changes in MAS score, and changes in range of motion. Safety outcomes included AEs at follow-up.

Information sources: MEDLINE, Embase, the Cochrane Central Register of Controlled Trials (CENTRAL), and ClinicalTrials.gov.

Main outcome(s): Change in UEFM score.

Additional outcome(s): Changes in MAS score and changes in the range of motion.

Quality assessment / Risk of bias analysis: The risk of bias for included RCTs was evaluated with Cochrane Collaboration tool. The risk of bias for the included non-randomized study was assessed by MINORS.

Strategy of data synthesis: We used STATA 12.0 for the statistical analysis. Weighted mean difference (WMD) and Risk ratio (RR) with 95% CI were calculated. Heterogeneity was assessed with Cochrane's Q test and 12. $P < 0.05$ means statistically significant.

Subgroup analysis: NA.

Sensitivity analysis: Sensitivity analysis was also performed to explore the stability of the consolidated results.

Language: English.

Country(ies) involved: China.

Keywords: CC7; Cerebral injury; Nerve Transfer.

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