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Effects of Wrist-Hand Orthosis on hand dysfunction after Stroke：a Meta-analysis

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ADMINISTRATIVE INFORMATION

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Review Stage at time of this submission - Not reported.

Conflicts of interest - None declared.

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Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 6 November 2024 and was last updated on 6 November 2024.

INTRODUCTION

Review question / Objective To systematically review the rehabilitation effects of wrist and hand orthosis on hand function impairment in stroke patients.

Condition being studied At present, there are some randomized controlled studies related to wrist and hand orthoses in stroke patients, but there are no articles summarizing and meta-analyzing them, so the analysis in this paper is very meaningful.

METHODS

Participant or population There were 361 patients with hand dysfunction after stroke, including 181 patients in the experimental group and 180 patients in the control group. 215 men and 146 women.

Intervention The interventions mainly included routine rehabilitation, application of wrist and hand orthoses or braces.

Comparator Routine rehabilitation plus wrist and hand orthoses or braces.

Study designs to be included RCT.

Eligibility criteria Diagnosis of stroke and post-stroke hand dysfunction is made by means of symptoms, signs and imaging (such as CT, MRI, etc.).

Information sources China National Knowledge Infrastructure (CNKI), Wanfang, VIP, SinoMed, Pubmed, Embase, Web of Science, and Cochrane Library.

Main outcome(s) Fugl-Meyer.

Quality assessment / Risk of bias analysis Cochrane.

Strategy of data synthesis Revman5.4、I2 test and Q test were used to evaluate the heterogeneity among the studies. When P > 0.1 and I2 < 50%, the studies were homogenous, and the fixed-effect model was used to merge the studies. When P≤0.1, I2≥50%, indicating heterogeneity between studies, random-effects model was used to merge. When the heterogeneity was large, sensitivity analysis or subgroup analysis was used to find the source of heterogeneity.

Subgroup analysis When the heterogeneity was large, sensitivity analysis or subgroup analysis was used to find the source of heterogeneity.

Sensitivity analysis Sensitivity analysis was performed by stata software.

Country(ies) involved China, USA.

Keywords Stroke；Hand function；Wrist-hand orthoses；Meta-analysis.

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