INPLASY PROTOCOL

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Conflicts of interest:
None.

The effectiveness and safety of Chuna manual therapy on scoliosis : A protocol for systematic review and/or meta-analysis

Park, SH[1]; Sung, WS[2]; Keum, DH[3]; Kim, EJ[4].

Review question / Objective: **Chuna manual therapy (CMT) is a manual therapy in Korean Medicine that treats structural or functional problems by providing effective stimulation to the patient's body structure. It is classified into bonesetting chuna therapy (e.g. manipulation and thrust) and fascia chuna therapy (e.g. joint mobilization, fascia releasing and traction). Our aims of systematic review are following; 1. To evaluate the effectiveness and safety of CMT on scoliosis. 2. To find out whether there is difference in effectiveness between bonesetting chuna therapy and fascia chuna therapy.**
Condition being studied: **Scoliosis is the spinal deformity and it is diagnosed when Cobb's angle is over 10 degrees. The prevalence of scoliosis has becoming up and there were many suggestions of treatments including surgical treatment and conservative treatment such as observation, bracing, physiotherapy, chuna manual therapy (CMT), and so on. CMT is a manual therapy in Korean Medicine that provides effective stimulation to the patient's body structure to treat structural dysfunction. After Korean health insurance benefit in 2019, its application on scoliosis has been increased and lot of studies have been reported.**

INPLASY registration number: This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 12 January 2021 and was last updated on 26 January 2021 (registration number INPLASY202110033).

INTRODUCTION

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METHODS

Search strategy: We will search randomized controlled trials about the CMT for scoliosis through multiple electronic databases, manual search, and contact to author. The following key terms will be used in combination to develop search strategy in each electronic databases own language: (scoliosis OR spinal curve) AND (chuna manual therapy OR chuna OR manual therapy OR chiropractic OR osteopathy OR Tuina OR spinal manipulation OR mobilization OR myofascial release OR massage). The literature search strategy is presented in Table 1. The search will be also performed for relevant gray literature sources, reports, and dissertations. The manual searching such as textbooks on CMT, references and contact to authors e-mail will also be conducted, if needed.

Participant or population: Patients diagnosed as scoliosis(idiopathic, degenerative, etc.), and there were no limitations on the participant's age, gender, or race.

Intervention: The eligible intervention is CMT including chiropractic, osteopathy, Tuina, spinal manipulation, mobilization, myofascial release, massage and so on. CMT will be assorted to bonesetting chuna therapy and fascia chuna therapy based on the technique procedure. The combined intervention with CMT will be accepted if the other intervention was used in both experimental and control group equally.

Comparator: Placebo, sham, exercise, brace, no treatment, standard care, and any conservational treatments not related manipulative therapy.

Study designs to be included: This study will include the published Randomized controlled trials (RCTs) that evaluated effectiveness of CMT for scoliosis. Case reports, observational studies, and cross-sectional studies will be excluded. The crossover designed studies will be included, but the data of the first phase will be included only.

Eligibility criteria: This study will include the published Randomized controlled trials (RCTs) that evaluated effectiveness of CMT for scoliosis. Case reports, observational studies, and cross-sectional studies will be excluded. The crossover designed studies will be included, but the data of the first phase will be included only.

Information sources: A search will be conducted from inception to June 2021 in the following databases: MEDLINE, EMBASE, Cochrane Library, China National Knowledge Infrastructure(CNKI), CiNii, Wanfang database, KoreaMed, Korean medical database, Korean Studies Information Service System(KISS), National Digital Science Library(NDSL), Korea Institute of Science and Technology Information(KISTI), and Oriental Medicine Advanced Searching Intergrated System (OASIS).

Main outcome(s): Cobb's angle.

Additional outcome(s): Pain index (such as visual analogue scale, numerical rating scale), functional status (such as curative rate), quality of life and disability(such as questionnaires of 36-Item Short-Form Health Survey, Scoliosis research society-22 outcomes questionnaire,

Oswestry disability index, Roland Morris Disability Questionnaire), adverse events.

Quality assessment / Risk of bias analysis: The risk of bias will be assessed using "risk of bias" tool from Cochrane Collaboration and it will be performed by two reviewers independently. The tool has seven domains: sequence generation, allocation concealment, blinding of participants and personnel, blinding of outcome assessors, incomplete outcome data, and selective outcome reporting and other bias.

Strategy of data synthesis: The Review Manager software for Windows (RevMan ver.5.3.; Copenhagen; The Nordic Cochrane Center, The Cochrane Collaboration, 2014) will be used for conducting meta-analysis and evaluating RR or SMD. A random-effect model or a fixed-effect model with 95% will be selected according to heterogeneity to calculate the pooled estimates of the effect size. After the data synthesis and analysis for finding out the effectiveness of CMT on scoliosis, the subgroup analysis will be conducted. The differences between bonesetting chuna therapy and fascia chuna therapy will be presented, if available.

Subgroup analysis: Potentially if data suitable.

Sensibility analysis: The sensitivity analysis will be conducted, if it is needed.

Country(ies) involved: Republic of Korea (South Korea).

Keywords: chuna manual therapy (CMT), scoliosis; meta-analysis; systematic review.

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