

Massage for neck pain: a systematic review and meta-analysis protocol

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ADMINISTRATIVE INFORMATION

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Review Stage at time of this submission - The review has not yet started.

Conflicts of interest - None declared.

INPLASY registration number: INPLASY2023100016

Amendments - This protocol was registered with the International Platform of Registered Systematic Review and Meta-Analysis Protocols (INPLASY) on 05 October 2023 and was last updated on 05 October 2023.

INTRODUCTION

Review question / Objective Is massage safe and effective for treating neck pain?

Condition being studied The incidence rate of neck pain is very high among the general population in the world. It is estimated that the incidence of neck pain ranges from 30% to 50%. More and more evidence suggests that neck pain is mainly attributed to workplace factors, and this disease has attracted widespread attention.

METHODS

Search strategy Jian Ai and Yong Xiang will discuss the selection process that determines the research follow the above criteria. After obtaining a copy from the management system, we will check

the eligibility to retrieve the title and abstract of the study and evaluate the text of the remaining study before including it. If there is any disagreement on the research option, we will consult with Jie Zhang to resolve it. Researchers Qidong Tian, Hongyi Wang will separate the results in conformity with the standardized data from every survey. We will select basic research information, such as interventions, basic participant information, outcome measures, and control measures. If it has different opinions, which can be discussed or negotiated through consultation with Jie Zhang during in the research process. Any missing information will be obtained by contacting the relevant author.

Participant or population Patients diagnosed with neck pain regardless of age, sex, race, or duration, and severity of the disease. Designs comparing the

two surgical procedures or different Tuina types will be excluded.

Intervention The designs of Massage such as the only experimental intervention, other similar Massage interventions, as massage, Chinese massage, manipulation, Chinese medicine massage, etc will be included. Trials evaluate Massage as combination to other treatments will be included as well.

Comparator The multiple interventions controled drug therapy, physiotherapy, behavioral therapy will be included without any language restrictions. No treatment, acupuncture, or placebo will also be included.

Study designs to be included Randomized controlled or non-controlled intervention, quasi randomized controlled clinical trials of NP comparing Massage forms with / without placebo, placebo, sham, or the same additional treatment will be included in the systematic evaluation. Case reports, retrospective studies, and animal experiments will be rejected and published in the peer-reviewed journals.

Eligibility criteria The study will strictly follow the inclusion and exclusion criteria of the study, as well as standardized intervention methods.

Information sources The following databases will be searched electronically from the inception to October 2023 with no language restriction: PubMed, web of science, the Cochrane Library, ICTRP, EBASE, the China National Knowledge Infrastructure (CNKI), Embase, and Chinese Biomedical Literature Database (CBM), Chinese Science and Technology Periodical Database (VIP), Wan-fang Data (WANFANG).

Main outcome(s) The Visual Analog Scale (VAS) (0–10) and the ability assessment of daily living activities (ADL) will be used to measure the symptom of neck pain.

Additional outcome(s) The additional outcomes include neck flexion angle (NFA), neck extension angle (NEA), and adverse events incidence.

Data management Hongyi Wang will collect data from each study. The collected data included the place of study, lead authors, baseline participant characteristics, year of publication, sample size, intervention, randomized methods, intervention duration, and distributional concealment, blinding methods, tracking, dropping out and exit, outcome measures, adverse event. The ambiguity in the

research can be solved by expert discussion. We will resolve any differences of opinion will be resolved by reviewing the original document and discussing the experts.

Quality assessment / Risk of bias analysis Jian Ai will check the method quality with the Cochrane bias risk tool. If the problem can not be resolved, a consensus of the third Expert (jie Zhang) will be sought in the review. Areas for assessment include: sequence generation; participant blindness; assignment concealment; Result Data Incompleteness; and result blindness. Bias risks for each item will be classified as “Low bias risk”, “High bias risk” or “Unknown bias risk”.

Strategy of data synthesis We will consider whether or not to conduct a meta-analysis based on clinical studies. Clinical studies included intervention methods, treatment duration, study design of measurement methods, and if the control group chose the same intervention methods. We will perform a meta-analysis with review manager 5.3.5 when including some good multi-homogeneity studies. When $I^2 < 50\%$, the fixed effect model $I^2 < 50\%$ were chosen. Otherwise, we cannot implement meta-analysis.

Subgroup analysis When the above clinical trial leads to Heterogeneity, we will conduct a subgroup analysis according to interventions, duration of treatment, different controls, and results. We'll tabulate the adverse reactions, and do an evaluation.

Sensitivity analysis We will conduct repeated system evaluation to test the robustness of the decision-making process according to different types of studies, including missing data, method quality, sample size, etc. We'll observe the volatility of the results.

Language restriction No language restrictions.

Country(ies) involved China - Yunnan University of Traditional Chinese Medicine First Affiliated Hospital.

Keywords Massage, neck pain, review protocol.

Dissemination plans For missing data extracted from the data contained, we will come into contact the author by telephone or E-mail if the data is incomplete. If the missing data is unavailable, the replacement values will be used to enter the missing data, if necessary, or by consulting an expert.

Contributions of each author

Author 1 - Jian Ai drafted the manuscript based on the opinions of all authors and conducted a meta-analysis.

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Author 2 - Hongyi Wang drafted the manuscript based on the opinions of all authors and conducted a meta-analysis.

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Author 3 - Yong Xiang collected included research data and conducted quality evaluations.

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Author 4 - Qidong Tian collected included research data and conducted quality evaluations.

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