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Dry Needling for Myofascial Pain Syndrome: An overview of systematic reviews

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ADMINISTRATIVE INFORMATION

Support - Jilin Provincial Natural Science Foundation (YDZJ202201ZYTS184).

Review Stage at time of this submission - Preliminary searches.

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 09 November 2023 and was last updated on 09 November 2023.

INTRODUCTION

Review question / Objective To evaluate the methodological quality, report quality, and evidence quality of a meta-analysis(MA) and systematic review(SR) of the efficacy of (dry needling) DN in the treatment of myofascial pain syndrome(MPS). P:According to the internationally recognized diagnostic criteria, the patients diagnosed with MPS have the onset site of the neck, shoulder, back, waist, regardless of race, gender, age, disease course, etc. I:Used DN alone as an intervention. C:The control interventions included sham DN therapy,placebo laser,acupoints acupuncture therapy, trigger point manual therapy(TPMT),trigger point injection, no treatment, or other conventional treatments. O:At least one was using the visual analogue scale(VAS)or numerical rating scale(NRS) served as the outcome index.

Condition being studied Myofascial pain syndrome (MPS) is an aseptic inflammatory disorder affecting skeletal muscles, primarily caused by the presence of myofascial trigger points (MTrPs).

METHODS

Participant or population According to the internationally recognized diagnostic criteria, the patients diagnosed with MPS have the onset site of the neck, shoulder, back, waist, regardless of race, gender, age, disease course, etc.

Intervention Used DN alone as an intervention.

Comparator The control interventions included sham DN therapy,placebo laser,acupoints acupuncture therapy, trigger point manual therapy(TPMT),trigger point injection, no treatment, or other conventional treatments.

Study designs to be included SRs/MAs containing only multiple RCTs that used DN for MPS were eligible.

Eligibility criteria Internationally recognized diagnostic criteria.

Information sources Embase, PubMed, Web of Science, Cochrane Library,Scopus, CINAHL, Medline, SinoMed database, China National Knowledge Infrastructure, Wanfang, and VIP.

Main outcome(s) At least one was using the visual analogue scale(VAS)or numerical rating scale(NRS) served as the outcome index.

Quality assessment / Risk of bias analysis The methodological quality of the studies was assessed using the assessment of multiple systematic reviews(AMSTAR) 2 scale, the quality of the literature reports was scored using the Preferred Reporting Items for Systems Reviews and Meta-Analyses2020 Version (PRISMA 2020), and the quality of the evidence was graded using the grading of recommendations assessment, development, and evaluation(GRADE) scale.ROBIS tool (Whiting et al., 2016) and recommendation evaluation.

Strategy of data synthesis In addition to descriptive analysis of existing data, we also reanalyzed the main outcomes to observe the efficacy of dry needling for MPS. Stata15.1 was used for data analysis, and the risk ratio (RR) and 95 confidence interval (CI) were used for the second Categorical variable. If P0.05, there was statistical significance. When there is significant heterogeneity ($I^2$50%), a random effects model should be used and the source of heterogeneity explored. The funnel plot and Egger test were used to detect publication bias, and sensitivity analysis was used to test the stability of the results.

Subgroup analysis None.

Sensitivity analysis None.

Country(ies) involved China.

Keywords myofascial pain syndrome,myofascial trigger points,dry needling,AMSTAR 2, GRADE, overview, systematic review.

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