

Clinical Trial Protocol

Iranian Registry of Clinical Trials

11 Sep 2026

A comparison between vibration and ultrasound waves accompanied with stretching exercises on improving function in athletes with posterior neck muscles' myofascial trigger points

Protocol summary

Summary

This study aimed to compare the effect of vibration and ultrasound therapy accompanied with stretching exercises on myofascial trigger point of posterior neck muscles in athletes. Thirty patients with posterior neck muscles' myofascial trigger points were recruited through simple non probability sampling and they were randomly assigned to either a vibration (n=15) or an ultrasound therapy accompanied with stretching exercises group (n=15), in 2008-2009. A 10-session program which lasted 4 weeks, 3 sessions per week, and 30 minutes per session was performed for both groups. Before and after the intervention, neck disability (ordinal) was assessed with Neck Disability Index (NDI), neck pain with visual analog scale (ordinal) and Northwick Park Neck Pain Questionnaire (NPNPQ), and shoulder pain and disability with Shoulder Pain and Disability Index (SPADI).

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT138904131675N2**

Registration date: **2010-07-04, 1389/04/13**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2010-07-04, 1389/04/13

Registrant information

Name

Asghar Akbari

Name of organization / entity

Zahedan University of Medical Sciences

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Recruitment status

Recruitment complete

Funding source

Zahedan University of Medical Sciences

Expected recruitment start date

2008-08-22, 1387/06/01

Expected recruitment end date

2009-06-22, 1388/04/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

A comparison between vibration and ultrasound waves accompanied with stretching exercises on improving function in athletes with posterior neck muscles' myofascial trigger points

Public title

A comparison between vibration and ultrasound waves accompanied with stretching exercises on improving function in athletes with posterior neck muscles' myofascial trigger points

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: being athlete, age between 20-40, having trigger point at posterior neck muscle & 1/4 upper trunk, with main complaint: muscle pain without neurological sign, no history of respiratory or cardiac

diseases, surgery, and neck & thoracic structural disorders Exclusion criteria: no completion of the treatment, using other therapeutic modalities during study, trauma, surgery and exacerbation of signs during the study

Age

From **20 years** old to **40 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **30**

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Double blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Tehran Payam-e- Noor University

Street address

No 233, Cross of Sepand, Shahid nejatolahi St.,

City

Tehran

Postal code

Approval date

2009-11-14, 1388/08/23

Ethics committee reference number

1002/111/7206

Health conditions studied

1

Description of health condition studied

Athletes with posterior neck muscles myofascial trigger point

ICD-10 code

M62

ICD-10 code description

Other soft tissue disorders

Primary outcomes

1

Description

Neck Pain

Timepoint

Before intervention, 4 weeks after intervention

Method of measurement

visual analog scale & Northwick Park Neck Pain Questionnaire

2

Description

Neck Disability

Timepoint

Before intervention, 4 weeks after intervention

Method of measurement

Neck Disability Index

3

Description

Shoulder Pain & Disability

Timepoint

Before intervention, 4 weeks after intervention

Method of measurement

Shoulder Pain& Disability Index

Secondary outcomes

empty

Intervention groups

1

Description

vibrator with low frequency, 2500 cycle per minute and moderate pressure.A 10 session program which lasted 4 weeks, 3 sessions per week, and 30 minutes per session

Category

Rehabilitation

2

Description

Ultrasound accompanied with stretching exercises: ultrasound with 1 MHz frequency, continuous mode, intensity 1.5 W/cm2 and duration 4.5 min. Each subject performed 10 stretching exercise. A 10 session program which lasted 4 weeks, 3 sessions per week, and 30 minutes per session

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Tavana Physiotherapy clinic, Zahedan

Full name of responsible person

Sheideh Naroii

Street address

Opposite to Boali drugstore, Beheshti St.,

City

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Full name of responsible person

Dr. Asghar Akbari

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Rehabilitation Sciences, Zahedan University of
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Zahedan

Grant name**Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

Title of funding source

Zahedan University of Medical Sciences

Proportion provided by this source

100

Public or private sector*empty***Domestic or foreign origin***empty***Category of foreign source of funding***empty***Country of origin****Type of organization providing the funding***empty***Person responsible for general inquiries****Contact****Name of organization / entity**

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

empty

Study Protocol

empty

Statistical Analysis Plan

empty

Informed Consent Form

empty

Clinical Study Report

empty

Analytic Code

empty

Data Dictionary

empty