Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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

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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 myofacial 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
Zahedan

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Zahedan University of Medical Sciences
Full name of responsible person
Dr. Asghar Akbari
Street address
Razmejo-Moghadam Laboratory, School of Rehabilitation Sciences, Zahedan University of Medical Sciences, Ayatoallah Kafami St.
City
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