

Clinical Trial Protocol

Iranian Registry of Clinical Trials

04 Jun 2026

A comparative study of diclofenac phonophoresis and ergonomic instructions on reducing neck and shoulder pain in women with myofascial trigger points in trapezius muscle

Protocol summary

Summary

The purpose of this study was to compare the effects of diclofenac phonophoresis with ergonomic instructions on reducing neck and shoulder pain and disability in women with myofascial trigger points in trapezius muscle. This randomized controlled trial was performed in Zahedan University of Medical Sciences, in 2009. Thirty patients with trigger points in trapezius muscle were participated through simple non probability sampling. Patients were selected based on following inclusion criteria: Age between 18-25, having trigger point in trapezius muscles with main complaint: muscle pain without neurological sign, no history of respiratory diseases, surgery, and neck & thoracic spine structural disorders. Patients were excluded if they had insufficient treatment, using other therapeutic modalities during study, trauma and surgery during the study. Patients were randomly assigned to one of three equal groups: diclofenac phonophoresis, ergonomic instructions, and control groups. In phonophoresis group, frequency of ultrasound 1 MHz, continuous mode, intensity 1.5 W/cm² and duration 4.5 min was used. Ergonomic group received instructions in order to maintain appropriate posture during activity of daily livings. Control group received ultrasound without output. A 12 session treatment program, during 4 weeks, 3 sessions per week was performed. Before and after intervention, we assessed neck pain with Northwick Park Neck Pain Questionnaire and shoulder pain and disability with Shoulder Pain and Disability Index.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201112261675N10**

Registration date: **2012-02-01, 1390/11/12**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2012-02-01, 1390/11/12

Registrant information

Name

Asghar Akbari

Name of organization / entity

Zahedan University of Medical Sciences

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Recruitment status

Recruitment complete

Funding source

Vice Chancellor for Research, Zahedan University of Medical Sciences.

Expected recruitment start date

2011-04-21, 1390/02/01

Expected recruitment end date

2011-10-23, 1390/08/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

A comparative study of diclofenac phonophoresis and ergonomic instructions on reducing neck and shoulder pain in women with myofascial trigger points in trapezius muscle

Public title

A comparative study of diclofenac phonophoresis and ergonomic instructions on reducing neck and shoulder pain in women with myofascial trigger points in trapezius muscle

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: Age between 18-25, having trigger point in trapezius muscles with main complaint: muscle pain without neurological sign; no history of respiratory diseases; surgery, and neck & thoracic spine structural disorders. Exclusion criteria: no completion of the treatment; using other therapeutic modalities during study; trauma and surgery during the study.

Age

From **18 years** old to **25 years** old

Gender

Female

Phase

2

Groups that have been masked

No information

Sample size

Target sample size: **30**

Randomization (investigator's opinion)

Randomized

Randomization description**Blinding (investigator's opinion)**

Not blinded

Blinding description**Placebo**

Not used

Assignment

Parallel

Other design features**Secondary Ids****1****Registry name**

no registration

Secondary trial Id

no trial id

Registration date

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

Ethics Committee of University of Sistan and Baluchestan

Street address

Daneshgah Blvd., University of Sistan and Baluchestan

City

Zahedan

Postal code

987-98155

Approval date

2012-01-08, 1390/10/18

Ethics committee reference number

902.21.245

Health conditions studied**1****Description of health condition studied**

subjects with trigger points in trapezius muscle

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

Northwick Park Neck Pain Questionnaire

2**Description**

Shoulder pain and disability

Timepoint

Before intervention, 4 weeks after intervention

Method of measurement

Shoulder Pain and Disability Index

Secondary outcomes**1****Description**

No secondary outcome

Timepoint

No secondary outcome

Method of measurement

No secondary outcome

Intervention groups**1****Description**

Diclofenac phonophoresis group: In phonophoresis group, frequency of ultrasound 1 MHz, continuous mode, intensity 1.5 W/cm² and duration 4.5 min for diclofenac phonophoresis was used.

Category

Rehabilitation

2

Description

Ergonomic instructions group: Ergonomic group received instructions in order to maintain appropriate posture during activity of daily livings.

Category

Rehabilitation

3

Description

Control group: Ultrasound without output

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Razmejo-Moghadam Physiotherapy

Full name of responsible person

Dr. Asghar Akbari

Street address

Dept. of Physiotherapy, School of Rehabilitation Sciences, Razmejo-Moghadam Laboratory, Ayatoallah Kafami St., Zahedan

City

Zahedan

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice Chancellor for Research of Zahedan University of Medical Sciences

Full name of responsible person

Dr. Hamidreza Mahmoudzadeh Sagheb

Street address

Deputy of Research, Zahedan University of Medical Sciences, Jannat Blvd., Dr. Hesabi Sq., Zahedan.

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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

Vice Chancellor for Research of 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

Zahedan University of Medical Sciences

Full name of responsible person

Dr. Asghar Akbari

Position

Ph.D in Physiotherapy, Head of Dept. of Physiotherapy.

Other areas of specialty/work

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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