

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 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/cm<sup>2</sup> 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

###### Country

Iran (Islamic Republic of)

###### Phone

+98 54 1322 8445

###### Email address

akbaria@zdmu.ac.ir

##### 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/cm<sup>2</sup> 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.

##### City

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

#### Street address

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

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akbari\_as@yahoo.com; akbaria@zaums.ac.ir

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www.zaums.ac.ir

## Person responsible for scientific 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

#### Street address

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## Person responsible for updating data

### Contact

**Name of organization / entity**

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**Full name of responsible person**

Dr. Asghar Akbari

**Position**

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

**Other areas of specialty/work****Street address**

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**Web page address**

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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*