

# 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**

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## **Person responsible for scientific inquiries**

### **Contact**

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## Person responsible for updating data

### Contact

**Name of organization / entity**

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**Full name of responsible person**

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**Position**

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