

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Comparison of the upper trapezius and the infraspinatus trigger point therapy by dry needling in overhead athletes with unilateral shoulder pain: a double-blind randomized clinical trial

Protocol summary

Summary

The original purpose of this study is to compare two effects of dry needling: direct effect of dry needling of upper trapezius and remote effect of dry needling of infraspinatus muscle on pain and tissue sensitivity of myofascial trigger points of upper trapezius muscle. method: 40 overhead athletes with shoulder impingement syndrome and active trigger points in both upper trapezius and infraspinatus has been entered the study. Exclusion criteria was common contraindications of dry needling and cognitive problems and trigger point treatment in the last month. Participants were divided randomly into 2 groups of direct needling of upper trapezius and needling of infraspinatus. Intervention was done in 3 sessions with 3 days interval. Assessment of subjective pain, pressure pain threshold and pain and disability index for upper extremity was done just before and after 2 days of treatment sessions.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2015120825437N1**
Registration date: **2016-01-08, 1394/10/18**
Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2016-01-08, 1394/10/18

Registrant information

Name

Maryam Morovati Ardakani

Name of organization / entity

Shiraz University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 71 3823 2869

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Recruitment status

Recruitment complete

Funding source

Shiraz University of Medical Sciences

Expected recruitment start date

2015-03-06, 1393/12/15

Expected recruitment end date

2015-08-06, 1394/05/15

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of the upper trapezius and the infraspinatus trigger point therapy by dry needling in overhead athletes with unilateral shoulder pain: a double-blind randomized clinical trial

Public title

Remote effect of dry needling on pain and tissue sensitivity of muscles trigger points.

Purpose

Treatment

Inclusion/Exclusion criteria

inclusion criteria: overhead athletes; between 18_ 60 years old; shoulder impingement syndrome; active myofascial trigger points in both upper trapezius and infraspinatus muscles. exclusion criteria :local trauma and infection; anti-coagulant drugs consumption;

pregnancy with risk of abortion; heart disease and immune system disease; addiction; cognitive problems; history of surgery on neck and upper back; neurologic deficit; serious medical conditions; cervical radiculopathy; trigger treatment in the past month

Age

From **18 years** old to **60 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **40**

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**

Shiraz University of Medical Sciences

Street address

Zand blvd, Shiraz, Iran

City

Shiraz

Postal code**Approval date**

2015-03-02, 1393/12/11

Ethics committee reference number

ct-9373-7403

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

shoulder and arm pain

ICD-10 code

M25.5, M79

ICD-10 code description

M25.5 pain in joint, M79.6 pain in limb

Primary outcomes**1****Description**

subjective pain

Timepoint

before and 3 days after intervention

Method of measurement

visual analogue scale

2**Description**

tissue sensitivity (pressure pain threshold)

Timepoint

before and 3 days after intervention

Method of measurement

digital algometry

3**Description**

disability index of upper extremity

Timepoint

before and 3 days after intervention

Method of measurement

DASH questionnaire

Secondary outcomes

empty

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

direct intervention group(control): upper trapezius trigger point dry needling in 3 sessions with 3 days interval

Category

Other

2**Description**

indirect intervention group (intervention):infraspinatus muscle trigger point dry needling in 3 sessions with 3 days interval

Category

Other

Recruitment centers**1****Recruitment center****Name of recruitment center**

Iran Zamin polyclinic

Full name of responsible person

Maryam Morovati

Street address
Golestan town
City
Shiraz

Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Shiraz University of Madical Sciences
Full name of responsible person
Mr. MirAlaie
Street address
Rehabilitatin faculty, Abiverdi 1 avenue, Chamran
blvd.
City
Shiraz

Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?

Yes

Title of funding source

Shiraz University of Madical 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
Shiraz University of Medical Sciences
Full name of responsible person
Dr. Fahimeh Kamali
Position
PHD- physiotherapist, university professor
Other areas of specialty/work
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Person responsible for scientific

inquiries

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Person responsible for updating data

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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