

Clinical Trial Protocol

Iranian Registry of Clinical Trials

15 Jun 2026

Effects of dry needling on pain and function of throwing athletes with scapular dyskinesia

Protocol summary

Study aim

Determination of the effects of dry needling on pain and function of throwing athletes with scapular dyskinesia

Design

Parallel groups, double-blinded, randomized clinical trial

Settings and conduct

After completing the informed consent form and being informed about the research, participants enter the research and randomly assigned to treatment or control groups. they won't be aware of which group they would be in; also assessment and treatment would be done by two therapists

Participants/Inclusion and exclusion criteria

Inclusion criteria: age between 18 to 45 years; doing overhead sports; a positive indication of lateral scapular slide test or scapular dyskinesia test. Exclusion criteria: pain on both sides. recent history of injury to the ribs and cervical vertebrae; recent fracture or dislocation of the upper extremity; dry needling contraindication: using anticoagulant drugs; diabetes; immune system impairments; needle phobia; hypertension; local edema on the shoulder area; local infection or wound on the shoulder area; pregnancy

Intervention groups

In the intervention group, besides scapular mobilizations, each of the muscles upper trapezius, lower trapezius, subscapularis, pectoralis minor, and serratus anterior would be treated by using dry needling on trigger points. treatment is 3 sessions with two days in between. In the control group, patients with trigger points will be treated with 4 sessions of 10 minutes scapular mobilizations including 3 sets with 30 seconds rest in between. treatment will be carried out for 2 weeks (2 sessions a week)

Main outcome variables

Pain, function

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20190609043846N1**

Registration date: **2019-07-05, 1398/04/14**

Registration timing: **prospective**

Last update: **2019-07-05, 1398/04/14**

Update count: **0**

Registration date

2019-07-05, 1398/04/14

Registrant information

Name

Alireza Kheradmandi

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 71 3825 6191

Email address

alirezaa228@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2019-07-11, 1398/04/20

Expected recruitment end date

2020-01-10, 1398/10/20

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effects of dry needling on pain and function of throwing athletes with scapular dyskinesia

Public title

Effects of manual therapy and dry needling on shoulder pain

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Engaging in overhead sports Positive indication of Lateral Scapular slide test or Scapular dyskinesia test Trigger points

Exclusion criteria:

Any recent surgery & traumatic injury on shoulder Diabetics Any infections Any usage of any coagulant drugs

Age

From **18 years** old to **45 years** old

Gender

Both

Phase

N/A

Groups that have been masked

- Participant
- Data analyser

Sample size

Target sample size: **40**

Randomization (investigator's opinion)

Randomized

Randomization description

Block randomization method

Blinding (investigator's opinion)

Double blinded

Blinding description

Participants won't be aware of which group they allocated to. patient assessment and treatment will be carried out by two different therapists

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Shiraz University of Medical Sciences

Street address

Opposite to Felestin Street, Zand Avenue

City

Shiraz

Province

Fars

Postal code

1433671348

Approval date

2019-05-15, 1398/02/25

Ethics committee reference number

IR.SUMS.REHAB.REC.1398.010

Health conditions studied

1

Description of health condition studied

Scapular dyskinesia

ICD-10 code

M99.9

ICD-10 code description

Biomechanical lesion, unspecified

Primary outcomes

1

Description

Pain

Timepoint

Before and after treatment

Method of measurement

Numeric rating scale (NRS)

2

Description

Function

Timepoint

Before and after treatment

Method of measurement

Persian version of DASH questionnaire

3

Description

Changes of scapular dyskinesia ratio

Timepoint

Before and after treatment

Method of measurement

Scapular dyskinesia test, lateral scapular slide test

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: patients with pain and trigger points in each of the muscles: upper trapezius, lower trapezius, subscapularis, pectoralis minor and serratus anterior will be treated with 4 sessions scapular mobilizations and 3 sessions dry needling

Category

Rehabilitation

2**Description**

Control group: patients with pain and trigger points in each of the muscles: upper trapezius, lower trapezius, subscapularis, pectoralis minor, and serratus anterior will be treated with 4 sessions scapular mobilizations

Category

Rehabilitation

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

Rehabilitation Sciences School of Shiraz University of Medical Sciences

Full name of responsible person

Alireza Kheradmandi

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Sponsors / Funding sources**1****Sponsor****Name of organization / entity**

Shiraz University of Medical Sciences

Full name of responsible person

Dr. Younes Ghasemi

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Grant name**Grant code / Reference number****Is the source of funding the same sponsor****organization/entity?**

Yes

Title of funding source

Shiraz University of Medical Sciences

Proportion provided by this source

100

Public or private sector

Public

Domestic or foreign origin

Domestic

Category of foreign source of funding*empty***Country of origin****Type of organization providing the funding**

Academic

Person responsible for general inquiries**Contact****Name of organization / entity**

Shiraz University of Medical Sciences

Full name of responsible person

Alireza Kheradmandi

Position

Student

Latest degree

Master

Other areas of specialty/work

Physiotherapy

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Person responsible for scientific inquiries**Contact****Name of organization / entity**

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Full name of responsible person

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Position

Associate Professor

Latest degree

Ph.D.

Other areas of specialty/work

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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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Sharing plan**Deidentified Individual Participant Data Set (IPD)**

Yes - There is a plan to make this available

Study Protocol

Yes - There is a plan to make this available

Statistical Analysis Plan

Not applicable

Informed Consent Form

Yes - There is a plan to make this available

Clinical Study Report

Yes - There is a plan to make this available

Analytic Code

Not applicable

Data Dictionary

Not applicable

Title and more details about the data/document

All data are shareable after samples unidentification

When the data will become available and for how long

9 months after the publication of results

To whom data/document is available

Researchers working in academic institutions

Under which criteria data/document could be used

In order to compare with similar studies

From where data/document is obtainable

Alireza Kheradmandi; email: alirezaa228@gmail.com;
phone number: 00989380275871

What processes are involved for a request to access data/document

Applicants can request data retrieval 9 months after the publication of results, and the data will be sent after a maximum of one month.

Comments