Clinical Trial Protocol
Iranian Registry of Clinical Trials

10 Jun 2026

The Effect of Dry Needle Intervention on AcromioHumeral Distance and Shoulder Pain and Disability in Patient with Subacromial Pain Syndrome.

Protocol summary

Study aim
The aim of this study was to investigate the effect of dry needle on the subacromial space(SAS).

Design
The clinical trial has two non-randomized and parallel groups of intervention and control with 3 months follow-up and designed for 30 samples which are entered into each of the intervention or control groups one by one according to the order of entering the research.

Settings and conduct
The research is being done in Tehran at Raz physiotherapy clinic and Mehregan radiology institute. Samples are selected from clients who are eligible to enter the research and have the willingness to participate. The study is single-blind and the colleague who measures the subacromial shoulder-distance by ultrasound before and after the intervention does not know about grouping.

Participants/Inclusion and exclusion criteria
People with subacromial shoulder pain syndrome referred to Raz Physiotherapy Center in 2021-2022 except for those with heart problems, injuries such as fractures, dislocations or trauma

Intervention groups
The intervention includes performing physical therapy on the painful shoulder. In the intervention group, dry needling is added to this treatment and at the end of the session, a dry needle is applied to the scapular levator muscles, rhomboids, as well as the active trigger points found in the first, third, fifth, seventh, and ninth sessions.

Main outcome variables
Shoulder Pain; Shoulder Disability; Shoulder Subacromial Distance

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20210614051583N1**
Registration date: **2021-08-20, 1400/05/29**
Registration timing: **registered_while_recruiting**

Last update: **2021-08-20, 1400/05/29**
Update count: **0**

Registration date
2021-08-20, 1400/05/29

Registrant information

Name
Jamshid Mohammadiasl
Name of organization / entity
Country
Iran (Islamic Republic of)
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+98 21 4497 4770
Email address
mohammadi_pt@yahoo.com

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2021-05-22, 1400/03/01

Expected recruitment end date
2022-05-22, 1401/03/01

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
The Effect of Dry Needle Intervention on AcromioHumeral Distance and Shoulder Pain and Disability in Patient with Subacromial Pain Syndrome.

Public title

The Effect of Dry Needling on Shoulder Pain and AcromioHumeral Distance

Purpose
Supportive

Inclusion/Exclusion criteria

Inclusion criteria:
People with subacromial shoulder pain syndrome Decreased subacromial space

Exclusion criteria:
History of fractures and dislocations in the scapula and shoulder area History of scapula and shoulder surgery Neurological symptoms in the upper extremities such as sensory and motor disorders Frozen shoulder and severe neck pain Congenital skeletal abnormalities Inflammatory joint disease such as rheumatoid arthritis Performing treatments such as dry needling, topical corticosteroids injection, PRP and ozone therapy during the last 3 months Fear of needles and taking Anticoagulant for dry needle group

Age
From **30 years** old to **50 years** old

Gender
Both

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **25**

Randomization (investigator's opinion)
Not randomized

Randomization description

Blinding (investigator's opinion)
Not blinded

Blinding description

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Research Ethic Committee of University of Social Welfare and Rehabilitation Science

Street address
No. 18, Shafagh Alley, Hajizadeh St. West Payambar St., Dist.5

City
Tehran

Province
Tehran

Postal code
1471755486

Approval date
2021-06-19, 1400/03/29

Ethics committee reference number
IR.USWR.REC.1400.062

Health conditions studied

1

Description of health condition studied
Shoulder Subacromial Pain Syndrome

ICD-10 code
M25.51

ICD-10 code description
Pain in shoulder

Primary outcomes

1

Description
shoulder pain

Timepoint
Before the intervention, after the end of the intervention and 3 months after the end of the intervention

Method of measurement
Visual Analogue Scale

2

Description
Shoulder disability

Timepoint
Before the intervention, after the end of the intervention and 3 months after the end of the intervention

Method of measurement
Shoulder Pain And Disability Index

3

Description
Upper extremity disability

Timepoint
Before the intervention, after the end of the intervention and 3 months after the end of the intervention

Method of measurement
The Disabilities of the Arm, Shoulder and Hand Score (QuickDash).

4

Description
Acromiohumeral Distance

Timepoint
Before the intervention, after the end of the intervention and 3 months after the end of the intervention

Method of measurement
Sonography

Secondary outcomes

empty

Intervention groups

1

Description
Control group: Physiotherapy is performed on the painful shoulder. Physiotherapy treatment modalities include TENS, Ultrasound, and Infrared radiation. These devices include TENS Model 62L and Ultrasound Model 215A provided by Novin Medical Engineering Company. Passive, active and resistance exercises are performed for 25 minutes to increase range of motion, reduce pain and strengthen of the Serratus Anterior, Lower and Middle Trapezius, Pectoralis Major, Latissimus Dorsi, Teres Major, Deltoid, Supraspinatus, Infraspinatus, Teres Minor muscles.

Category
Rehabilitation

2

Description
Intervention group: In the intervention group, dry needling is added to physiotherapy treatment and at the end of the physiotherapy session, dry needling intervention is applied to the Levator Scapula muscles, Rhomboids as well as active trigger points found in the first, third, fifth, seventh and ninth sessions.

Category
Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center
Raz Physiotherapy institute

Full name of responsible person
Jamshid Mohammadiasl

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No. 18, Shafaq Alley, Hajizadeh St., West Payambar St., District 5

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity
University of social welfare and rehabilitation sciences

Full name of responsible person
Dr. Hamidreza Khoramkhorshid

Street address
Kodakyar Alley., Daneshjo Blvd., Evin

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1985713834

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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
University of social welfare and rehabilitation 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
University of social welfare and rehabilitation sciences

Full name of responsible person
Jamshid Mohammadiasl

Position
PhD candidate

Latest degree
Master

Other areas of specialty/work
Physiotherapy

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No. 18, Shafagh Avenue, hajizadeh St., East Payambar St., Dist.5, Tehran

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Person responsible for scientific inquiries

Contact

Name of organization / entity
University of social welfare and rehabilitation sciences

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Person responsible for updating data

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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
Yes - There is a plan to make this available

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
Yes - There is a plan to make this available

Data Dictionary
Yes - There is a plan to make this available

Title and more details about the data/document
Part of the data, such as information about the main outcome, can be shared.

When the data will become available and for how long
Access period starts 6 months after the results are published

To whom data/document is available
It will be available only to researchers working in academic and scientific institutions

Under which criteria data/document could be used
Scientific research

From where data/document is obtainable
mohammadi_pt@yahoo.com

What processes are involved for a request to access data/document
One month after receiving the email

Comments