Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

The effects of focused shock wave on pain, range of motion, muscle strength and quality of life in non-professional athletes with chronic supraspinatus tendinopathy.

Protocol summary

Study aim
Effects of focused shock wave on pain, rang of motion, muscle strength and quality of life in non professional athletes with chronic supraspinatus tendinopathy

Design
Randomized clinical trial, without control group, on 32 participant, using block randomization

Settings and conduct
This is two blinded block randomized clinical trial that compare the effects of shock wave and friction massage on supraspinatus tendinopathy. Evaluation and treatment of cases and is done by another physiotherapist in the Physiotherapy Clinic of Oxin The variables and measurement method and treatment protocol in the groups are as follows: Range of flexion, abduction, external rotation with an inclinometer, strength of the supraspinatus with a dynamometer, and pressure pain threshold of the supraspinatus, middle deltoid, and upper trapezius with an algometer، determination of visual pain using questionnaire before and after each treatment session and quality of life with questionnaire .Treatment protocol for group 1 performing 4 shock wave sessions and for group 2 performing 4 sessions friction massage once a week. both groups also receive 12 training sessions (3 times a week).

Participants/Inclusion and exclusion criteria
Inclusion criteria: non-professional athletes; pain in sport activities in last 3 months; age limitation 20-45 years old; body mass index below 30; being positive at least 2 of these test: empty can, painful arc, Hawkins. Exclusion criteria: all contraindication for shock wave; history of surgery, fracture or osteoarthritis in the treatment areas.

Intervention groups
Intervention group1: 4 shock wave sessions once a week Intervention group 2: 4 friction massage sessions once a week Both group recieve 12 sessions of exercise therapy (3 times a week)

Main outcome variables
Pain reduction ,improve range of motion and quality of life

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20220829055825N1**
Registration date: **2023-01-01, 1401/10/11**
Registration timing: **prospective**

Last update: **2023-01-01, 1401/10/11**
Update count: **0**

Registration date
2023-01-01, 1401/10/11

Registrant information

Name
Alireza Karimi

Name of organization / entity

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Iran (Islamic Republic of)

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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2023-01-21, 1401/11/01

Expected recruitment end date
2023-04-19, 1402/01/30

Actual recruitment start date
empty

Actual recruitment end date
empty
Trial completion date
empty

Scientific title
The effects of focused shock wave on pain, range of motion, muscle strength and quality of life in non-professional athletes with chronic supraspinatus tendinopathy.

Public title
Effect of focused shock wave on chronic supraspinatus tendinopathy
Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria:
Non-professional athletes (2 to 3 hours per week) Pain in sport activities in last 3 month Age limitation 20-45 years old Body mass index below 30 Being positive at least 2 of these test: empty can, painful arc, Hawkins
Exclusion criteria:
All contraindication of shock wave History of surgery, fracture or osteoarthritis in the treatment areas
Age
From **20 years** old to **45 years** old
Gender
Both

Phase
N/A
Groups that have been masked

- Investigator
- Data analyser

Sample size
Target sample size: **32**
Randomization (investigator's opinion)
Randomized
Randomization description
AABB; BBAA; ABAB; BABA; ABBA; BAAB. Write these items on six paper and put in the six packets. Draw eight times until eight envelopes are selected, provided that the envelopes are repeated; each characteristics of the specification of the four allocations of the individual.
Blinding (investigator's opinion)
Double blinded
Blinding description
The main researcher in this study won't aware of the randomization of the patients and the patients will treat by another therapist who will aware of the treatment groups. At the end, the data analyst will analyze the data without knowing what treatment package groups 1 and 2 received.
Placebo
Not used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Ethic Committee of Iran University of Medical Sciences
Street address
Next to Milad Tower, Hemat Highway, Iran University of Medical Sciences.
City
Tehran
Province
Tehran
Postal code
1449614535
Approval date
2022-07-28, 1401/05/06
Ethics committee reference number
IR.IUMS.REC.1401.446

Health conditions studied

1

Description of health condition studied
Chronic supraspinatus tendinopathy
ICD-10 code
M75.80
ICD-10 code description
Other shoulder lesions, unspecified shoulder

Primary outcomes

1

Description
Range of motion of flexion, abduction, external rotation of the shoulder
Timepoint
At the first and end of treatment program
Method of measurement
Range of motion with inclinometer

2

Description
Strength of the supraspinatus muscle
Timepoint
At the first and end of treatment program
Method of measurement
Muscle strength with dynamometer

3

Description
Pain pressure threshold of the muscles of the

supraspinatus, middle deltoid, and upper trapezius.

Timepoint
At the first and end of treatment program

Method of measurement
Pain pressure threshold with algometer

4

Description
Amount of Visual Analog Scale

Timepoint
Before and after each session

Method of measurement
Visual Analog Scale (VAS) questionnaire

5

Description
Quality of life

Timepoint
At the first and end of treatment program

Method of measurement
SF-36 questionner

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group:4 session (one session per week) Extracorporeal Shockwave Therapy(ESWT) Focused Storz (Swiss 2019) . Protocol: 1000-2000 plus, frequency 4 Hz, intensity 0.1 mj/mm2

Category
Rehabilitation

2

Description
Control group:4 session (one session per week) Friction massage for 10 minutes on supraspinatus tendon, myofacsial tissue of supraspinatus, deltoid and upper trapezius.

Category
Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center
Oxin Physio clinic

Full name of responsible person
Alireza Karimiahmadabadi

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No 11/9., Fakharmoghamad Ave., Dadman Blvd., Sanat Squ.

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity
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Full name of responsible person
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Street address
Physical Therapy Dept., 3rd floor, School of rehabilitation Sciences, Madadkaran Ave., Shah Nazari St., Maadar Sq., Mirdamaad Blv., Tehran, Iran

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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
Iran 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
Oxin physiotherapy Clinic

Full name of responsible person
Alireza Karimiahmadabadi

Position

Master student

Latest degree

Bachelor

Other areas of specialty/work

Physiotherapy

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Associate professor of physiotherapy

Latest degree

Ph.D.

Other areas of specialty/work

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Person responsible for updating data

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

Undecided - It is not yet known if there will be a plan to make this available

Study Protocol

Undecided - It is not yet known if there will be a plan to make this available

Statistical Analysis Plan

Undecided - It is not yet known if there will be a plan to make this available

Informed Consent Form

Undecided - It is not yet known if there will be a plan to make this available

Clinical Study Report

Undecided - It is not yet known if there will be a plan to make this available

Analytic Code

Undecided - It is not yet known if there will be a plan to make this available

Data Dictionary

Undecided - It is not yet known if there will be a plan to make this available