

Clinical Trial Protocol

Iranian Registry of Clinical Trials

19 Sep 2026

A comparative study of exercise therapy and physiotherapy in improving shoulder pain, posture, muscle strength, flexibility and range of motion in patients with shoulder overuse syndrome

Protocol summary

Summary

All examinations performed on patients with shoulder overuse syndrome to recognize for their inclusion criteria to participate in the study. A signed consent for participation in the study also was obtained from the attending subjects, who will be treated for shoulder pain/dysfunction. Before the intervention, pain intensity, posture, muscle strength and flexibility of movement of patients are evaluated. Pain is measured using the VAS. Scapular position and rotation are measured ,in first evaluation, shoulder protraction will be measured using the tape and formulas and in other methods scapular lateral slide test condition is evaluated. Also , Shoulder posture is measured by the distance of acromion process distance to the wall patient is standing in front of it, by a special ruler, double square (millimeter). Mid thoracic curve will be measured with a flexible ruler (Flexi ruler) between T2 and T12 curvature and degree of the curve is calculated with the corresponding formula. For head posture , the angle between the horizontal line that passes through C7 and the second line of the C7 spinous process to ear TRAGO is measured by a protractor. Isometric muscle strength by hand held dynameter is evalutaed. During muscle Pectoralis minor length is measured with two methods of assessment , the first method, posterolateral aspect of acromion process to the bed edge in which patient lying on it is measured and in the second method the distance between the two anatomical landmark, the angle of internal inferior (medial-inferior) Coracoid process to the junction of the fourth rib to the sternum is measured with a caliper (Vernier calliper). The range of shoulder abduction and external rotation by Goniometer (Kendall method) is evaluated. There are two groups in this study [Exercise Therapy (I) Group and Physical Therapy(II) Group], Exercise group receive a exercises program includes strengthening , stretching and Scapular Stabilization

exercise. Group II, Physical Therapy (PT) who receive a conventional electrotherapy consisted of Conventional TENS and Ultrasound for 18 sessions (three sessions per week for 6 weeks). Eventually results in the both groups on pain, posture, muscle strength, flexibility, shoulder range of motion of patients will be evaluated and compared.

General information

Acronym

Exercise therapy & Physical modalities in shoulder overuse syndrom

IRCT registration information

IRCT registration number: **IRCT201111025486N2**

Registration date: **2012-01-17, 1390/10/27**

Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2012-01-17, 1390/10/27

Registrant information

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Name of organization / entity

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Recruitment status

Recruitment complete

Funding source

Tehran University of Medical Sciences

Expected recruitment start date

2012-01-01, 1390/10/11

Expected recruitment end date

2013-01-10, 1391/10/21

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

A comparative study of exercise therapy and physiotherapy in improving shoulder pain, posture, muscle strength, flexibility and range of motion in patients with shoulder overuse syndrome

Public title

A comparative study of exercise therapy and physiotherapy in improving shoulder pain, posture, muscle strength, flexibility and range of motion in patients with shoulder overuse syndrome

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: unilateral or bilateral shoulder overuse syndrome based on patient's history & physical exams; age between 20 to 50; normal mental state; no previous history of trauma & acute injury; no previous history of shoulder surgery; no previous history of shoulder dislocation and no previous history of shoulder or arm fractures. Exclusion criteria: patient's unwilling to continue the study; diseases that impede patient to be attended in the study and absence in treatment sessions

Age

From 20 years old to 50 years old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: 70

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**

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

Ethics committee of vice chancellor for research , TUMS

Street address

Keshvarz Blvd

City

Tehran

Postal code

1449614525

Approval date

2011-12-19, 1390/09/28

Ethics committee reference number

1992 / 130 / 90/ص

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

Shoulder overuse syndrom

ICD-10 code

M75.4

ICD-10 code description

Impingement syndrome of shoulder

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

Pain

Timepoint

Before intervention and six weeks after intervention

Method of measurement

Pain scale (VAS)

2**Description**

Pectoralis minor length

Timepoint

Before intervention and six weeks after intervention

Method of measurement

Pectoralis minor length measurements

3**Description**

Shoulder Range of Motion

Timepoint

Before intervention and six weeks after intervention

Method of measurement

Goniometric measurement of shoulder Abduction and External rotation

4

Description

Posture

Timepoint

Before intervention and six weeks after intervention

Method of measurement

Head, midthoracic, shoulder posture with measurement and calculations

Secondary outcomes

empty

Intervention groups

1

Description

Intervention for group II or physical therapy group consist of three days a week physical therapy during which the subjects treated with conventional TENS and ultrasound for 18 sessions (three sessions per week for 6 weeks) .

Category

Rehabilitation

2

Description

Exercise Therapy Group intervention : The exercise program will be done three days a week for 6 weeks. The exercise program is included strengthening exercise, stretching ,proprioceptive and scapular stabilization exercise with swiss ball and Therabands.After 20 to 30 minute warm-up exercises will begin . In training sessions, a series of stretching e xercises for the anterior muscles of the chest muscles and internal rotators of the shoulders are included.

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Sport Medicine evaluation center - Hazrateh Rasoul Akram Hospital

Full name of responsible person

Dr Saeed Sepehrifar

Street address

Niyaesh street

City

Tehran

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Tehran University of Medical Sceinces - Vice Chancellor for Research

Full name of responsible person

Ms Alamdar

Street address

Keshvarz blvd.

City

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Grant name

معاونت پژوهشی دانشگاه علوم پزشکی تهران

Grant code / Reference number

90-01-30-13144

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

Yes

Title of funding source

Tehran University of Medical Sceinces - Vice Chancellor for Research

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

Tehran University of Medical Sciences

Full name of responsible person

Dr Azar Moezy

Position

PhD

Other areas of specialty/work

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Web page address**Person responsible for updating data****Contact****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