

Clinical Trial Protocol

Iranian Registry of Clinical Trials

11 Sep 2026

Comparison of the Efficacy of Manual Treatment According to Fascial Distortion Model Versus Joint Mobilization in Pain Reduction of Patients With Shoulder Impingement Syndrome Who Refer to Pirouzi Physiotherapy Clinic

Protocol summary

Study aim

Comparison of Manual Treatment According to Fascial Distortion Model Versus Joint Mobilization in Reducing Pain, Increasing Range of Motion and Improving Function of Patients With Shoulder Impingement Syndrome

Design

Single-blinded randomized clinical trial with parallel groups and phase 3 on 26 patients. Randomization is carried out by coin toss method.

Settings and conduct

Study population are patients with shoulder impingement syndrome that are referred to Pirouzi physiotherapy clinic in Mashhad.

Participants/Inclusion and exclusion criteria

Inclusion criteria are: pain by arm elevation with Intensity of ≥ 3 on VAS and positive Neer & Hawkins-Kennedy tests. Exclusion criteria are: stroke, rheumatoid arthritis, full-thickness rotator cuff tear; trauma; surgery or freezing of the shoulder; osteoporosis or malignancy.

Intervention groups

In FDM group, the diagnosis is based on body language, subjective complaints, objective findings and mechanism of injury. In mobilization group, related accessory movements in glenohumeral, scapulothoracic, acromioclavicular and sternoclavicular joints are assessed in regard to the presence of pain and/or restriction. Treatment includes oscillatory movements with Maitland grading and frequency of two times per second that first is done in comfortable position and progressively toward painful position. Grades I-II and III-IV are used for pain and restriction respectively.

Main outcome variables

Pain intensity (VAS); pain-free abduction ROM (Goniometry); function (SPADI); patient satisfaction with treatment (Likert Scale)

General information

Reason for update

Acronym

FDM (Fascial Distortion Model)

IRCT registration information

IRCT registration number: **IRCT20200922048803N1**

Registration date: **2021-04-20, 1400/01/31**

Registration timing: **registered_while_recruiting**

Last update: **2021-04-20, 1400/01/31**

Update count: **0**

Registration date

2021-04-20, 1400/01/31

Registrant information

Name

Mahmood Moradi

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 51 3851 6396

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m.moradi@razi.tums.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2020-01-01, 1398/10/11

Expected recruitment end date

2021-09-22, 1400/06/31

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of the Efficacy of Manual Treatment According to Fascial Distortion Model Versus Joint Mobilization in Pain Reduction of Patients With Shoulder Impingement Syndrome Who Refer to Pirouzi Physiotherapy Clinic

Public title

Comparison of the Efficacy of Manual Treatment according to Fascial Distortion Model Versus Joint Mobilization in Patients With Shoulder Impingement Syndrome

Purpose

Treatment

Inclusion/Exclusion criteria**Inclusion criteria:**

Pain By Arm Elevation With Intensity of ≥ 3 on VAS
Positive Neer & Hawkins-Kennedy Tests

Exclusion criteria:

Stroke Rheumatoid Arthritis Full-thickness Rotator Cuff
Tear Trauma Surgery of the Shoulder Freezing of the
Shoulder Osteoporosis Malignancy

Age

No age limit

Gender

Both

Phase

N/A

Groups that have been masked

- Participant

Sample size

Target sample size: 26

Randomization (investigator's opinion)

Randomized

Randomization description

Randomization would be carried out by coin toss method for patients with odd number, and the patients with even number would receive the other treatment. Heads side is indicative of FDM treatment and tails side is indicative of joint mobilization.

Blinding (investigator's opinion)

Single blinded

Blinding description

The patients would be blinded in respect to allocation in either of groups.

Placebo

Not used

Assignment

Parallel

Other design features**Secondary Ids**

empty

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

Ethics committee of Tehran University of Medical Sciences

Street address

School of Rehabilitation of Tehran University of Medical Sciences, Piche Shemiran, Enghelab Ave, Tehran

City

Tehran

Province

Tehran

Postal code

1148956111

Approval date

2020-02-05, 1398/11/16

Ethics committee reference number

IR.TUMS.VCR.REC.1398.880

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

Shoulder Impingement Syndrome

ICD-10 code

M75.4

ICD-10 code description

Impingement syndrome of shoulder

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

Pain Intensity

Timepoint

Before and after every treatment session and after a 2 week follow up

Method of measurement

Visual Analogue Scale

Secondary outcomes**1****Description**

Pain-free Abduction ROM

Timepoint

Before and after every treatment session and after a two week follow up

Method of measurement

Goniometry

2**Description**

Function

Timepoint

Before the first treatment session, after the last session

and after a two week follow up
Method of measurement
Persian Version of SPADI

3

Description
Patient Satisfaction With Treatment
Timepoint
After a two week follow up
Method of measurement
Likert Scale

Intervention groups

1

Description
Intervention group: Three Sessions of Manual Treatment according to Fascial Distortion Model (Including Triggerband, Herniated Triggerpoint, Continuum, Folding, Cylinder And Tectonic) Every Other Day And Each Session Lasting 30 Minutes
Category
Rehabilitation

2

Description
Intervention group: Three Sessions of Joint Mobilization (Including Oscillatory Movements With Maitland Grading and a Frequency of Two Times per Second Which Are Done Initially in Resting Position and Progressively Into Painful Position of the Patient) Every Other Day and Each Session Lasting 30 Minutes
Category
Rehabilitation

Recruitment centers

1

Recruitment center
Name of recruitment center
Pirouzi Physiotherapy Clinic
Full name of responsible person
Mahmood Moradi
Street address
No. 536, Between 16 & 18, Pirouzi Ave.
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Tehran University of Medical Sciences
Full name of responsible person
Mohammad Ali Sahraian
Street address
Qods Ave., Keshavarz Blvd.
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Province
Tehran
Postal code
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Phone
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msahrai@sina.tums.ac.ir
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Tehran 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
Tehran University of Medical Sciences
Full name of responsible person
Mahmood Moradi
Position
Master of Science Student
Latest degree
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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