

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

The comparison maitland mobilization and mobilization with movement effects on pain, rang of motion and static balance in ankle sprain with mechanical instability

Protocol summary

Study aim

The comparison of maitland mobilization and mobilization with movement effects on pain, range of motion and static balance in ankle sprain with mechanical instability

Design

Fifty patients participating in this study are placed randomly in two receiving intervention groups. Patients are treated six sessions, 3 times a week.

Settings and conduct

Patients will be treated at the physiotherapy clinic of Semnan university of medical sciences, The treatment protocol includes the application of grade 3 maitland mobilization in the anteroposterior direction of talus bone in a group of patients and application of mobilization with movement based on mulligan technique in the other group

Participants/Inclusion and exclusion criteria

Inclusion criteria: age range between 20 and 40 years old; detection of mechanical degree of instability by orthopedic specialist; motionless between two weeks and four weeks before intervention; second grade injury of the lateral ligament of ankle; hasn't fracture, surgery or any lower limb damage except ankle sprain in last 6 months; hasn't systematic diseases like diabetes or rheumatism diseases; hasn't spinal cord problems or each problems that reduce the person balance. Exclusion criteria: exacerbation of pain or any other problem for the person during the test intra-articular steroid injection in the last 6 months; neurological, vascular or visual disturbances that disturb the person balance; having a rehabilitation program before entering the study; being professional sportsman.

Intervention groups

In a group of patients, grade 3 of maitland mobilization is applied in the anteroposterior direction of the talus bone. In the other group, mobilization with movement based on

the Mulligan technique is applied.

Main outcome variables

Assessment of pain based on visual analogue scale and measurement the dorsiflexion range of motion based on WBLT method will be done before and after intervention.

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20190108042292N2**

Registration date: **2019-02-17, 1397/11/28**

Registration timing: **prospective**

Last update: **2019-02-17, 1397/11/28**

Update count: **0**

Registration date

2019-02-17, 1397/11/28

Registrant information

Name

Cyrus Taghizadeh Delkhosh

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 23 3365 4180

Email address

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2019-04-21, 1398/02/01

Expected recruitment end date

2019-05-22, 1398/03/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The comparison maitland mobilization and mobilization with movement effects on pain, rang of motion and static balance in ankle sprain with mechanical instability

Public title

The effect of mobilization on ankle sprain

Purpose

Treatment

Inclusion/Exclusion criteria**Inclusion criteria:**

Age range between 20 and 40 years
Detection of mechanical degree of instability by orthopedic specialist
Motionless between two weeks and four weeks before intervention
Second grade injury of the lateral ligament of ankle
Hasn't fracture, surgery or any lower limb damage except ankle sprain in last 6 months
Hasn't systematic diseases like diabetes or rheumatism
Hasn't spinal cord problems or each problems that reduce the person balance

Exclusion criteria:

Exacerbation of pain or any other problem for the person during the test
Intra-articular steroid injection in the last 6 months
Neurological, vascular or visual disturbances that disturb the person balance
Having a rehabilitation program before entering the study
Being professional sportsman

Age

From **20 years** old to **40 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **50**

Randomization (investigator's opinion)

Randomized

Randomization description

In this study, patients will be divided into two groups with equal number by simple randomized sampling method. In such away that by assignning a coin, it is determined which group of each patient will be placed in this way, if one of the groups is completed earlier, the rest of the persons will be in the other group

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 Semnan University of Medical Sciences

Street address

Semnan University of Medical Sciences, Basij Blvd., Semnan

City

Semnan

Province

Semnan

Postal code

3519899951

Approval date

2018-12-18, 1397/09/27

Ethics committee reference number

IR.SEMUMS.REC.1397.205

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

Ankle sprain

ICD-10 code

S90.9

ICD-10 code description

Unspecified superficial injury of ankle, foot and toe

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

Pain Intensity in VAS

Timepoint

Before and After Intervention

Method of measurement

Visual Analogue Scale

Secondary outcomes

empty

Intervention groups**1****Description**

Intervention group: six sessions of treatment, 3 times a week include the application of grade 3 maitland mobilization in the antroposterior direction of Talus bone 3 sets 30 seconds and 30 seconds rest between sets

Category

Rehabilitation

2

Description

Intervention group: six sessions of treatment, 3 times a week include the application of mobilization with movement based on Mulligan technique 3 sets 30 seconds and 30 seconds rest between sets

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Ebn Sina Rehabilitation Clinic

Full name of responsible person

Adeleh Noruzi

Street address

Ebn Sina Clinic, 17 Shahrivar Blvd, Semnan

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Semnan University of Medical Sciences

Full name of responsible person

Dr Parviz Kokhaie

Street address

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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

Semnan 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

Semnan University of Medical Sciences

Full name of responsible person

Dr Syrus Taghizadeh

Position

Assistant professor

Latest degree

Ph.D.

Other areas of specialty/work

Physiotherapy

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Person responsible for scientific inquiries

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Person responsible for updating data

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

No - There is not a plan to make this available

Justification/reason for indecision/not sharing IPD

No additional information

Study Protocol

No - There is not a plan to make this available

Statistical Analysis Plan

No - There is not a plan to make this available

Informed Consent Form

No - There is not a plan to make this available

Clinical Study Report

No - There is not a plan to make this available

Analytic Code

No - There is not a plan to make this available

Data Dictionary

No - There is not a plan to make this available