Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

The effect of myofascial chain release on clinical symptoms, gastrocnemius muscle stiffness and plantar fascia thickness and stiffness in patients with chronic plantar fasciitis

Protocol summary

Study aim

1- The effect of myofascial release on gastrocnemius muscle on Young elastic modulus of plantar fascia and gastrocnemius muscle in patients with chronic plantar fasciitis 2- The effect of myofascial chain release (plantar fascia and gastrocnemius and hamstring muscles) on Young elastic modulus of plantar fascia and gastrocnemius muscle in patients with chronic plantar fasciitis 3- Comparison of the effect of myofascial chain release and myofascial release on the results of VAS and FAAM questionnaires in patients with chronic plantar fasciitis 4- Comparison of the effect of myofascial chain release and myofascial release on Young elastic modulus in plantar fascia and gastrocnemius muscle in patients with chronic plantar fasciitis

Design

randomized controlled trial, parallel group trial, single blinded, randomized, phase 3 on 30 patients, balloting will be used for randomization.

Settings and conduct

This study will be performed in the physiotherapy department of the Rehabilitation Faculty of Iran University of Medical Sciences. Patients will be divided into experimental group (release on plantar fascia, gastrocnemius muscle and hamstrings) and control group (release on gastrocnemius). This study will be of the one-blind (patient) type.

Participants/Inclusion and exclusion criteria

1- Pain at the site of attachment of the plantar fascia to the medial tubercle of the calcaneus 2- Increased pain in the initial steps in the morning or after a long rest 3- More than 3 months have passed since the onset of pain

Intervention groups

In the intervention group, myofascial release on plantar fascia, gastrocnemius and hamstring muscle will be used. In the control group, this technique will be used only on the gastrocnemius muscle.

Main outcome variables

young's modulus of plantar fascia young's modulus of medial gastrocnemius young's modulus of lateral gastrocnemius

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20211006052686N1**
Registration date: **2022-01-05, 1400/10/15**
Registration timing: **registered_while_recruiting**

Last update: **2022-01-05, 1400/10/15**
Update count: **0**

Registration date

2022-01-05, 1400/10/15

Registrant information

Name

seyed mehdi mohsenipour

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 21 4490 1637

Email address

mohsenipour.sm@iums.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2021-12-21, 1400/09/30

Expected recruitment end date

2022-07-21, 1401/04/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of myofascial chain release on clinical symptoms, gastrocnemius muscle stiffness and plantar fascia thickness and stiffness in patients with chronic plantar fasciitis

Public title

The effect of myofascial chain release in patients with chronic plantar fasciitis

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

pain over the origin of plantar fascia near medial tubercle of calcaneus bone first steps pain in the morning or after prolonged rest More than 3 months have passed since the onset of pain 35 to 60 years the degree pf pain is between 3-7 on the VAS scale

Exclusion criteria:

History of orthopedic surgery in the lower extremities Having diabetes and other underlying diseases affecting connective tissue Perform injection, shock wave therapy and physiotherapy in the last 3 months Contraindications for the treatment of myofascial release Unwillingness to continue treatment

Age

From **35 years** old to **65 years** old

Gender

Both

Phase

3

Groups that have been masked

- Participant
- Data analyser
- Data and Safety Monitoring Board

Sample size

Target sample size: **30**

Randomization (investigator's opinion)

Randomized

Randomization description

simple random sampling by sealed envelope - The control group is written in one envelope and the intervention group is written in the other envelope. The patient chooses one of them without knowing the contents of the envelope.

Blinding (investigator's opinion)

Single blinded

Blinding description

The patient receives the type of intervention in sealed envelopes. The data analyser and the safety committee are unaware of the type of intervention group.

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Research Ethics Committees of Iran University of Medical Sciences

Street address

Rehabilitation Faculty of Iran University of Medical Sciences, Madadkaran Ave, Shahnazari St, Madar Sq, Tehran

City

Tehran

Province

Tehran

Postal code

۱۳۴۸۷ - ۱۵۴۵۹

Approval date

2021-11-06, 1400/08/15

Ethics committee reference number

IR.IUMS.REC.1400.713

Health conditions studied

1

Description of health condition studied

Plantar Fasciitis

ICD-10 code

M72. 2

ICD-10 code description

A superficial fibromatosis arising from soft tissue of the plantar regions. It is characterized by the presence of spindle-shaped fibroblasts, hypercellularity, and an infiltrative growth pattern.An inflammation of the plantar fascia, the tissue along the

Primary outcomes

1

Description

young's modulus of plantar fascia

Timepoint

before intervention - 2 or 3 days after intervention

Method of measurement

compressive sonoelastography

2

Description

young's modulus of medial gastrocnemius

Timepoint

before intervention - 2 or 3 days after intervention

Method of measurement

compressive sonoelastography

3

Description
young's modulus of lateral gastrocnemius
Timepoint
before intervention - 2 or 3 days after intervention
Method of measurement
compressive sonoelastography

Secondary outcomes

1

Description
plantar fascia thickness
Timepoint
before intervention - 2 or 3 days after intervention
Method of measurement
sonography

2

Description
pain intensity
Timepoint
before intervention - 2 or 3 days after intervention
Method of measurement
numeric pain rating scale

3

Description
functional assessment
Timepoint
before intervention - 2 or 3 days after intervention
Method of measurement
FAAM Questionare

Intervention groups

1

Description
Intervention group: myofascial chain release in hamstring and gastrocnemius muscle and plantar fascia
Category
Treatment - Other

2

Description
Control group: myofascial release in gastrocnemius mucsle
Category
Treatment - Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Physiotherapy clinic of Rehabilitation Faculty of Iran University of Medical Sciences
Full name of responsible person
Ali Amiri
Street address
Shahnazari Ave - Madadkaran St
City
Tehran
Province
Tehran
Postal code
15459-13487
Phone
+98 21 2222 2059
Email
rehab@iums.ac.ir

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Iran University of Medical Sciences
Full name of responsible person
Ali Amiri
Street address
Shahnazari Ave - Madadkaran St
City
Tehran
Province
Tehran
Postal code
15459-13487
Phone
+98 21 2222 2059
Email
rehab@iums.ac.ir
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
Iran University of Medical Sciences

Full name of responsible person
Seyed mehdi Mohsenipour

Position
PhD Candidate

Latest degree
Master

Other areas of specialty/work
Physiotherapy

Street address
3th Floor, No 32, Phase 6, Tehran University Town, Lashgari Highway, Tehran

City
Tehran

Province
Tehran

Postal code
1389938311

Phone
+98 21 4490 1637

Fax

Email
mohsenipour.sm@iums.ac.ir

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)
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
All data can be shared

When the data will become available and for how long
6 months after publication of the results

To whom data/document is available
Academic Researchers

Under which criteria data/document could be used
In order to use the results of this research to design future studies

From where data/document is obtainable
The applicant can send email with these addresses: mohsenipour.sm@iums.ac.ir or mohsenipour@hotmail.com.

What processes are involved for a request to access data/document
The application will be submitted to the physiotherapy department of the Rehabilitation Faculty and will be sent to the applicant after the approval of the supervisor and the department manager.

Comments