

Clinical Trial Protocol

Iranian Registry of Clinical Trials

31 Jul 2026

The effect of dry needling on pain and Range of Motion of ankle joint and thickness of plantar fascia in patient with plantar fasciitis

Protocol summary

Summary

Objective: Evaluation the effect of dry needle on pain and the ankle sprain motion range and plantar fascia thickness changes in patients with Plantar Fasciitis. Study design: Random (shuffle bags method), without placebo control, single central. Experimental population: Patients with Plantar Fasciitis who referred to Neuromuscular Rehabilitation research center of Semnan University of medical sciences Inclusion criteria: Patients with PFs in aged 40 to 60 years; having trigger point in gastro or soleus muscles or both of them; thickness plantar fascia more than 4 mm; foot pain in first steps in the morning and at least six months has passed since the onset of pain; the pain level in visual analog scale is at least four; non-athlete persons; plantar flexion or dorsi flexion is less than normal range. Exclusion criteria: Diabetes; hypersensitivity to needle; fear of needle; pregnancy; infection; peripheral neuropathy; hemophilia or coagulation problems; history of plantar fascia surgery; history of injection in the last three months. Sample size, intervention, intervention time and outcome of the study: Sample size of this study is 30 persons will be divided into intervention (15 persons) and control (15 persons) group. Intervention group: Patients were undergoing to dry needle (according protocol). After dry needling for four weeks so once a week, examinations of the level of pain and range of motion and thickness plantar fascia will be performed. Also, one month after treatment, the variables will be measured again to follow up the treatment. Control group: In the control group will not perform any treatments and it just to compare with intervention group for level of thickness plantar fascia, the level of pain and range of motion will be measured at the beginning of the study and one month later.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2017080525732N22**

Registration date: **2017-08-23, 1396/06/01**

Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2017-08-23, 1396/06/01

Registrant information

Name

Alireza Emadi

Name of organization / entity

Semnan University of Medical Sciences, Semnan, Iran

Country

Iran (Islamic Republic of)

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Email address

are20935@semums.ac.ir

Recruitment status

Recruitment complete

Funding source

Semnan University of Medical Sciences

Expected recruitment start date

2017-08-23, 1396/06/01

Expected recruitment end date

2018-02-20, 1396/12/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of dry needling on pain and Range of Motion of ankle joint and thickness of plantar fascia in patient with plantar fasciitis

Public title

The effect of dry needling on pain and Range of Motion of ankle joint and thickness of plantar fascia in patient with plantar fasciitis

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria: Patients with PFs in aged 40 to 60 years; having trigger point in gastro or soleus muscles or both of them; thickness plantar fascia more than 4 mm; foot pain in first steps in the morning and at least six months has passed since the onset of pain; the pain level in visual analog scale is at least four; non-athlete persons; plantar flexion or dorsi flexion is less than normal range. Exclusion criteria: Diabetes; hypersensitivity to needle; fear of needle; pregnancy; infection; peripheral neuropathy; hemophilia or coagulation problems; history of plantar fascia surgery; history of injection in the last three months.

Age

From **40 years** old to **60 years** old

Gender

Both

Phase

2

Groups that have been masked

No information

Sample size

Target sample size: **30**

Randomization (investigator's opinion)

N/A

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 Semnan University of Medical Sciences

Street address

Semnan University of Medical Sciences, Basij Blvd, Semnan

City

semnan

Postal code

3514799442

Approval date

2017-07-24, 1396/05/02

Ethics committee reference number

IR.semums.REC.1396.133

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

Plantar fasciitis

ICD-10 code

M72.2

ICD-10 code description

Plantar fasciitis

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

Plantar Fascia Thickness

Timepoint

Before and after using a dry needle

Method of measurement

Ultrasonography

Secondary outcomes

empty

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

Control group: In the control group will not perform any treatments and it just to compare with intervention group for level of thickness plantar fascia, the level of pain and range of motion will be measured at the beginning of the study and one month later.

Category

Rehabilitation

2**Description**

Intervention group: Patients were undergoing to dry needle (according protocol). After dry needling for four weeks so once a week, examinations of the level of pain and range of motion and thickness plantar fascia will be performed. Also, one month after treatment, the variables will be measured again to follow up the treatment.

Category

Rehabilitation

Recruitment centers**1****Recruitment center****Name of recruitment center**

Neuromuscular Rehabilitation Research Center

Full name of responsible person

Ziaeddin Safavi-Farokhi

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Web page address**Sponsors / Funding sources****1****Sponsor****Name of organization / entity**Deputy of Research and Technology, Semnan
University of Medical Sciences**Full name of responsible person**

Dr Mohammad Reza Asgari

Street addressSemnan University of Medical Sciences, Basij Blvd,
Semnan**City**

Semnan

Grant name**Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

Title of funding sourceDeputy of Research and Technology, Semnan University
of Medical Sciences**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**

Semnan University of Medical Sciences

Full name of responsible person

Ziaeddin Safavi-Farokhi

Position

Physiotherapist

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Full name of responsible person

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Web page address**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