Clinical Trial Protocol
Iranian Registry of Clinical Trials

10 Jun 2026

The Effect of Adding Tecartherapy On routine physicalTherapy On Pain And Kinetic Changes In Runners With Medial Tibial Stress Syndrome

Protocol summary

Study aim
The effect of adding tecartherapy on routine physiotherapy on pain and kinetic changes in runners with medial tibial stress syndrome

Design
The study will be randomized, with a sample size of 40 people in parallel groups. Eligible patients will be randomly assigned to the intervention group and control group using the blocking method.

Settings and conduct
intervention group with tecar combined with routine physiotherapy which includes tens and ultrasound. A special training program that includes stretching and strengthening exercises and group B as a control group that receives only routine physiotherapy according to the protocol of the first group. This protocol will be used and the site of this project is the Faculty of Rehabilitation of Iran University of Medical Sciences.

Participants/Inclusion and exclusion criteria
Inclusion criteria: any gender, people aged 20-40 years, have a history of pain during exercise in the inner-posterior part of the tibia, and pain by touching the posterior-inner edge of the tibia is about 5 cm in place, Pain that occurs with exercise and occurs during and after exercise, the presence of pain in the dominant affected leg, subjects at least a week to suffer from this pain. Exclusion criteria: imbalance, middle ear disorder, current or previous radiological signs of a stress fracture or other type of fracture, local infection or osteomyelitis, tumor in the area, previous surgery on the same leg, previous use of tecartherapy to treat tibial medial stress syndrome, pregnancy, implanted pacemaker, skin disorder and numbness in the area.

Intervention groups
Two different treatment groups. The group treated with tecar therapy and the group treated with the usual physiotherapy.

Main outcome variables
Pain intensity, balance, kinetic changes

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20220301054160N1**
Registration date: **2022-04-08, 1401/01/19**
Registration timing: **prospective**

Last update: **2022-04-08, 1401/01/19**
Update count: **0**

Registration date
2022-04-08, 1401/01/19

Registrant information

Name
Saeideh Babaeitabar

Name of organization / entity

Country
Iran (Islamic Republic of)

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+98 21 4450 8936

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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2022-04-20, 1401/01/31

Expected recruitment end date
2022-09-22, 1401/06/31

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title

The Effect of Adding Tecartherapy On routine physicalTherapy On Pain And Kinetic Changes In Runners With Medial Tibial Stress Syndrome

Public title

The Effect of Adding Tecartherapy On routine physicalTherapy On Pain And Kinetic Changes In Runners With Medial Tibial Stress Syndrome

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Subjects of any gender People aged 20-40 years. Have a history of pain during exercise in the inner-posterior part of the tibia bone and the pain spreads by touching the posterior-inner edge of the tibia about 5 cm in place Existence of pain that occurs with exercise and occurs during and after exercise The presence of pain in the affected leg is predominan Have this pain for at least a week

Exclusion criteria:

Patients with current or previous radiological symptoms of stress fractures or other types of fractures Local infection or osteomyelitis in the same foot Tumor in the area Previous surgery on the same leg Previous use of tecartherapy to treat tibial internal stress syndrome. Pregnancy Disorder and numbness in the area Patients with balance disorders, patients with middle ear disorder

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: **40**

Randomization (investigator's opinion)

Randomized

Randomization description

Eligible patients are randomly assigned to intervention and control groups by the block method. Random numbers 1 and 2 are produced using www. randomization.com, then are placed in sealed envelopes in order. When patients are referred, one envelope is opened in order. If the number in the envelope is 1, the patient enters the intervention group with tecartherapy and routine physiotherapy, and if the number is 2, patient enters the control group, which includes only routine physiotherapy.

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

No5,Dehkade Olmpic Ave.Zibadasht Blv,Tehran Town

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Tehran

Province

Tehran

Postal code

1485963635

Approval date

2022-03-13, 1400/12/22

Ethics committee reference number

IR.SEMUMS.REC.1400.343

Health conditions studied

1

Description of health condition studied

Medial Tibial Stress Syndrome

ICD-10 code

S86.89

ICD-10 code description

Other injury of other muscles and tendons at lower leg level

Primary outcomes

1

Description

Pain

Timepoint

In the first session and after the completion of 9 treatment sessions

Method of measurement

Visual scale of pain

2

Description

Measurement of ground reaction force

Timepoint

In the first session and after the completion of 9 treatment sessions

Method of measurement

Force plate

3

Description

Measuring the average displacement velocity

Timepoint

In the first session and after the completion of 9 treatment sessions

Method of measurement

Force plate

4

Description

Measure the amount of displacement

Timepoint

In the first session and after the completion of 9 treatment sessions

Method of measurement

Force plate

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: Tecar treatment group, 9 sessions of tecar therapy, the total time of treatment with tecar intervention in this study will be 15 minutes, which will be used as 5 minutes in capacitive mode and 10 minutes in resistance mode, and with the usual physiotherapy treatment that is exactly the same.

Category

Treatment - Devices

2

Description

Control group: The routine physiotherapy treatment group consists of nine treatment sessions including sessions on a daily basis. 20 minutes of high frequency tens with a frequency of 100 Hz and a pulse duration of 40 microseconds will be used at the site of pain, followed by 3 minutes of 1MHz ultrasound with a 20% diode cycle at the site of pain.

Category

Treatment - Devices

Recruitment centers

1

Recruitment center

Name of recruitment center

Physiotherapy Clinic of Iran University

Full name of responsible person

Saeideh Babaeitabar

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Semnan University of Medical Sciences

Full name of responsible person

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Grant name

Grant code / Reference number

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

No

Title of funding source

saeideh Babaeitabar

Proportion provided by this source

100

Public or private sector

Private

Domestic or foreign origin

Domestic

Category of foreign source of funding

empty

Country of origin

Type of organization providing the funding

Persons

Person responsible for general inquiries

Contact

Name of organization / entity

Semnan University of Medical Sciences

Full name of responsible person

saeideh Babaeitabar

Position

Graduate Student

Latest degree

Bachelor

Other areas of specialty/work

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Person responsible for scientific inquiries

Contact

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Position
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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