Clinical Trial Protocol
Iranian Registry of Clinical Trials

04 Jun 2026

The Effects of TECAR Therapy on Pain, Range of Motion, Strength and Subscale of The Copenhagen Hip and Groin Outcome Scale Questionnaire in Athletes with Longstanding Adductor Related Groin Pain

Protocol summary

Study aim

The Effects of TECAR Therapy on Pain, Range of Motion, Strength and Subscale of Hip and Groin Outcome Scale Questionnaire in Athletes with Longstanding Adductor Related Groin Pain

Design

Double blinded randomized control trial. Allocation of patients to intervention and control groups based on random blocking method. The arrangement of the blocks is done based on the randomization website. The sample size was estimated using GPower 3.1 software and considering 10% dropout of 22 people.

Settings and conduct

Treatment protocol including a ten-minute warm-up with a treadmill, therapy and finally three stretching exercises three times a week and ten sessions in total. The experimenter is not aware of the grouping and treatment in each group. Placebo group are not aware of the output intensity of the TECAR device, so the current research is a double-blind type. Interventions are performed in the physiotherapy clinic of the Faculty of Rehabilitation Sciences of Iran.

Participants/Inclusion and exclusion criteria

Include Criteria: Athletes with unilateral and chronic adductor related groin pain, Ability to read and write in Persian language, Age 18-45, Tenderness and Pain in resistance test, Pain at the beginning of the study should be 3-7؛ non include criteria: unwillingness to continue the treatment, Accompanying injuries, Referral Pain, Received treatment in the last 1 months, Contraindications for using TECAR

Intervention groups

In the intervention group, the effectiveness of the TECAR on adductor related groin pain is investigated. In the control group, this device is used but with zero output intensity.

Main outcome variables

Pain, Range of Motion, Strength, Quality of Life, Symptoms, Participation in physical activities, Physical function on daily living , Function on sports and recreational activities

General information

Reason for update

Correction following preliminary study

Acronym

IRCT registration information

IRCT registration number: **IRCT20220622055250N1**
Registration date: **2022-09-18, 1401/06/27**
Registration timing: **prospective**

Last update: **2023-03-24, 1402/01/04**
Update count: **1**

Registration date

2022-09-18, 1401/06/27

Registrant information

Name

Sara Nazari

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 21 2222 7124

Email address

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2022-09-23, 1401/07/01

Expected recruitment end date

2023-03-20, 1401/12/29

Actual recruitment start date
empty
Actual recruitment end date
empty
Trial completion date
empty

Scientific title
The Effects of TECAR Therapy on Pain, Range of Motion, Strength and Subscale of The Copenhagen Hip and Groin Outcome Scale Questionnaire in Athletes with Longstanding Adductor Related Groin Pain

Public title
The Effects of TECAR Therapy in Athletes with Longstanding Adductor Related Groin Pain
Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria:
Athletes with Adductor related groin pain, at least one month after the injury Unilateral Injury of Adductor Muscles Ability to Read and Write in Persian language (Elementary First Period) Age 18-45 Tenderness in Adductor Muscles Pain during Resistance Test of Adductor Muscles Pain at the Beginning of the Study Should be 3-7. (Based on Visual Analogue Scale) Injury confirmation by a Sports Specialist Doctor
Exclusion criteria:
Unwillingness to Continue Treatment Suffering from Injuries and Fractures in the Lower Limbs in a Way that Prevents the Completion of the Treatment Process Urinary and Genital Infections Hernia (inguinal, femoral) Referral Pains to the Groin Area Malignant tumors Accompanying Problems in the Groin Area Received Treatment in the Last 1 Month Cases of Non-use of the TECAR Therapy Device Include Pregnancy, Tumor, Electrical Devices Placed Inside the Body Such as Cardiac Pacemaker, Fever, Having Transplanted Tissue.
Age
From **18 years** old to **45 years** old
Gender
Both

Phase
N/A
Groups that have been masked

- Participant
- Outcome assessor

Sample size
Target sample size: **22**
Randomization (investigator's opinion)
Randomized
Randomization description
Allocation of patients to intervention and control groups is based on simple random block method (block size of 4 and allocation ratio 1:1).In this way, at the end of all four samplings, the number of samples in both groups is equal .The arrangement of the blocks is done based on the randomization website between the number one and six
Blinding (investigator's opinion)
Double blinded
Blinding description
In the current research, the examiner is not aware of the allocation of patients in each group, and the people in the placebo group are not aware of the output intensity of the TECAR device, so the current research is a double-blind type.
Placebo
Used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Etichal committee of Iran University of Medical Sciences
Street address
Iran University of Medical Sciences, Shahid Hemmat Highway, Tehran
City
Tehran
Province
Tehran
Postal code
1449614535
Approval date
2022-05-07, 1401/02/17
Ethics committee reference number
IR.IUMS.REC.1401.076

Health conditions studied

1

Description of health condition studied
Adductor Related Groin Pain
ICD-10 code
ICD-10 code description

Primary outcomes

1

Description
Pain
Timepoint
First session, session 6, session 10, After 1 month
Method of measurement
Visual Analogue Scale

Secondary outcomes

1

Description
Range of Motion
Timepoint
First session, Session 6, Session 10, After 1 month
Method of measurement
Goniometer

2

Description
Strength
Timepoint
First session, Session 6, Session 10, After 1 month
Method of measurement
Dynamometer

3

Description
Quality of Life
Timepoint
First session, Session 6, Session 10, After 1 month
Method of measurement
The Copenhagen Hip and Groin Outcome Score Questionnaire

4

Description
Pain
Timepoint
First session, Session 6, Session 10, After 1 month
Method of measurement
The Copenhagen Hip and Groin Outcome Score Questionnaire

5

Description
Symptoms
Timepoint
First session, Session 6, Session 10, After 1 month
Method of measurement
The Copenhagen Hip and Groin Outcome Score Questionnaire

6

Description
Participation in physical activities
Timepoint
First session, Session 6, Session 10, After 1 month
Method of measurement
The Copenhagen Hip and Groin Outcome Score Questionnaire

7

Description
Function, sports and recreational activities
Timepoint
First session, Session 6, Session 10, After 1 month
Method of measurement
The Copenhagen Hip and Groin Outcome Score Questionnaire

8

Description
Physical function, daily living
Timepoint
First session, Session 6, Session 10, After 1 month
Method of measurement
The Copenhagen Hip and Groin Outcome Score Questionnaire

Intervention groups

1

Description
Intervention group: The people who are in this group will receive ten sessions treatment in three times a week. In this group, the TECAR device will be used with the aim of heating the tissues for 15 minutes and with 30-40 percent of intensity.
Category
Rehabilitation

Recruitment centers

1

Recruitment center
Name of recruitment center
Physiotherapy Clinic, Faculty of Rehabilitation, Iran University of Medical Sciences
Full name of responsible person
Soheil Mansour Sohani
Street address
Faculty of Rehabilitation Sciences of Iran Medical Sciences University, Madadkaran Street, Shah Nazari Street, Madder Square, Mirdamad
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Iran University of Medical Sciences
Full name of responsible person

hossein keyvani

Street address

Iran University of Medical Sciences, Shahid Hemmat Highway, Tehran

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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

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

Sara Nazari

Position

Student

Latest degree

Bachelor

Other areas of specialty/work

Physiotherapy

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Position

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Latest degree

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Other areas of specialty/work

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Position

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Other areas of specialty/work

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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