Clinical Trial Protocol
Iranian Registry of Clinical Trials

09 Nov 2026

The comparison of two taping methods on pain, EMG activity and dynamic balance in athletes with patellofemoral pain syndrome

Protocol summary

Summary

Objectives: Comparision of two muscle taping techniques on the pain, electromyographic activity and dynamic balance in athletes with patellofemoral pain syndrome. Design:This is a randomized, blind, clinical trial. Thirty two athletes will be randomly assigned to two groups: Vastus Lateralis (VL) inhibitory taping and Vastus Medialis Obliqus (VMO) facillatory taping technique. Participants: 32 athletes aged 18-40 years old will tak part in the study. Inclusion critria: unilateral anterior or retropatellar knee pain; existance of symptoms for at least 2 month and an average pain level of 3 on visual analog scale. Exclusion critria: history of hip; knee or ankle surgery; a history of patellar dislocation or subluxation; or clinical evidence of meniscal lesion and ligamentous instability. Interventions: Kinesiologic tape will be attached to VL inhibitory group from from tibial tuberosity following VL path, up to 1/3 of the proximal tigh. for VMO facillatory group Kinesiologic tape will be attached from 1/3 of the proximal tigh following VMO path down to tibial tuberosity. Iindividuals in both groups will be assessed for pain, electromyographic activity of vasti in voluntary heel and toe raises and postural balance before and after interventions. Main Outcome Measures: participants will rate the perceived pain level using the 10-cm visual analog scale, electromyographic onset and activity of VMO and VL assesse during heel rise and down, Reach distance that normalize by dividing the distance by the participants' leg length during star excursion balance test performance.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2014071515932N3**
Registration date: **2014-08-16, 1393/05/25**
Registration timing: **prospective**
Last update:
Update count: **0**

Registration date

2014-08-16, 1393/05/25

Registrant information

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Recruitment status

Recruitment complete

Funding source

Shiraz University of Medical Sciences

Expected recruitment start date

2014-08-23, 1393/06/01

Expected recruitment end date

2014-11-22, 1393/09/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The comparison of two taping methods on pain, EMG activity and dynamic balance in athletes with patellofemoral pain syndrome

Public title

The effect of taping on performance in athletes with patellofemoral pain syndrome

Purpose

Supportive

Inclusion/Exclusion criteria

Inclusion critria: unilateral anterior or retropatellar knee pain while engaged in at least 2 of the following activities: prolonged sitting, climbing stairs, squatting, running, kneeling and jumping; existance of symptoms for at least 2 month; an average pain level of 3cm on a 10-cm visual analog scale; an insidious onset of symptoms unrelated to a traumatic incident and at least grade 11 in Functional Index Questionnaire. Exclusion critria: recent history of hip; knee or ankle surgery; a history of patellar dislocation or subluxation; or clinical evidence of meniscal lesion; ligamentous instability; patellar tendon pathology; chondral damage; osteoarthritis; or spinal referred pain; systemic diseases such as diabetes and rheumatism and bilateral PFP.

Age

From **18 years** old to **40 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **32**

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Single blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Shiraz University of Medical Sciences

Street address

Shiraz University of Medical Sciences, Zand Ave

City

Shiraz

Postal code

71345-1987

Approval date

2014-06-28, 1393/04/07

Ethics committee reference number

ct-9373-7053

Health conditions studied

1

Description of health condition studied

Patellofemoral pain syndrome

ICD-10 code

M94.2

ICD-10 code description

Chondromalacia

Primary outcomes

1

Description

The onse and amplitude of electromyographic activity

Timepoint

Before the intervention and immediately after intervention

Method of measurement

Telemetry EMG (Mega electronics Ltd.Finland)

2

Description

Pain

Timepoint

Before the intervention and immediately after intervention

Method of measurement

Visual analog scale

3

Description

Reach distance in dynamic balance

Timepoint

Before the intervention and immediately after intervention

Method of measurement

Tape

Secondary outcomes

empty

Intervention groups

1

Description

Kinesiologic tape will be attached with 15%-25% tension to VL inhibitory group from insertion to origin so it will be applied from tibial tuberosity following VL path, up to 1/3 of the proximal tigh.

Category

Rehabilitation

2

Description

For VMO facillatory group tape with 25%-50% tension will be attached from origin to insertion so it will be applied from 1/3 of the proximal tigh following VMO path down to tibial tuberosity

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Ghadir sports club

Full name of responsible person

Ms Zaravar

Street address

Shiraz School of Rehabilitation, First Abiverdi Ave, Chamran Boulevard

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Shiraz

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Shiraz University of Medical Sciences

Full name of responsible person

Dr. Mohammad Ali Sahmeddini

Street address

Vice-Chancellery of Research, Shiraz University of Medical Sciences, Zand Ave.

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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

Shiraz 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

Shiraz School of Rehabilitation, Shiraz University of Medical Sciences

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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)
empty

Study Protocol
empty

Statistical Analysis Plan
empty

Informed Consent Form
empty

Clinical Study Report
empty

Analytic Code
empty

Data Dictionary
empty