

Clinical Trial Protocol

Iranian Registry of Clinical Trials

18 Sep 2026

The effect of dynamic tape and kinesio tape on pain and electromyographic activity of selected thigh muscles in women with patellofemoral pain syndrome

Protocol summary

Study aim

This study aims to determine the effect of kinesio tape and dynamic tape on pain and electromyographic activity of selected thigh muscles in 20-30-year-old women with patellofemoral syndrome.

Design

A randomized, single-blind, cross-over, phase 2 study of 40 women with patellofemoral pain. A lottery will be done for randomization.

Settings and conduct

This study will be performed in the sports rehabilitation laboratory of Bu Ali Sina University. Each participant is evaluated in three different sessions with kinesio tape, dynamic tape, and control. The data analyzer will be blinded to the grouping.

Participants/Inclusion and exclusion criteria

Inclusion criteria: Patellofemoral pain syndrome; Pain higher than 3 according to the visual analog scale; Age between 20 and 30 years. Exclusion criteria: showing skin irritation sens to tape; Having a history of lower limb surgery.

Intervention groups

Intervention 1: Kinesiotype. In this condition, kinesio tape is applied to the knee. Then the evaluations are done. Intervention group 2: Dynamic type: In this condition the dynamic tape is applied to the knee. Then the evaluations are done. Control group: In the control condition without tape, evaluations are done.

Main outcome variables

Pain; Electromyographic activity of muscles; Joint position sense; Balance; Postural control

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20200204046368N10**

Registration date: **2023-06-03, 1402/03/13**

Registration timing: **prospective**

Last update: **2023-06-03, 1402/03/13**

Update count: **0**

Registration date

2023-06-03, 1402/03/13

Registrant information

Name

Zahra Raeisi

Name of organization / entity

Arak University

Country

Iran (Islamic Republic of)

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+98 86 3417 3492

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z_raisi13@yahoo.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2023-06-15, 1402/03/25

Expected recruitment end date

2023-09-06, 1402/06/15

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of dynamic tape and kinesio tape on pain and electromyographic activity of selected thigh muscles in

women with patellofemoral pain syndrome

Public title
The effect of dynamic type and kinesio tape on people with patellofemoral pain syndrome

Purpose
Supportive

Inclusion/Exclusion criteria
Inclusion criteria:
A history of pain behind or around the one-sided patella caused by at least two of the following activities: long-term sitting, climbing stairs, squatting, running, kneeling, and jumping positive patellar grind test Pain level of at least 30 mm on a 100 mm visual analog scale
Exclusion criteria:
History of knee surgery Skin irritation to the tape

Age
From **20 years** old to **30 years** old

Gender
Female

Phase
2

Groups that have been masked

- Data analyser

Sample size
Target sample size: **40**

Randomization (investigator's opinion)
Randomized

Randomization description
In this study, 3 interventions of kinesio tape, dynamic tape, and control are investigated and compared in a group of women with patellofemoral pain syndrome. Each intervention is done in a separate session. The order of interventions for each participant will be chosen randomly and by lottery at the beginning of each session.

Blinding (investigator's opinion)
Single blinded

Blinding description
The data analyzer will not be aware of the group's classification. The information of the groups will be provided to the data analyzer in the form of numbers 1, 2, and 3, and for each participant with a code.

Placebo
Not used

Assignment
Crossover

Other design features

Secondary Ids
empty

Ethics committees

1

Ethics committee
Name of ethics committee
Bu Ali Sina university ethics committee in research
Street address

Shahid Mostafa Ahmadi Roshan Street
City
Hamedan
Province
Hamadan
Postal code
6517838695
Approval date
2023-04-11, 1402/01/22
Ethics committee reference number
IR.BASU.REC.1402.013

Health conditions studied

1

Description of health condition studied

Patellofemoral pain syndrome

ICD-10 code

M22.2

ICD-10 code description

Patellofemoral disorders

Primary outcomes

1

Description

Pain

Timepoint

Before and after tape

Method of measurement

Visual analogue scale

2

Description

Electromyographic activity of muscles

Timepoint

Before and after tape

Method of measurement

Electromyography

Secondary outcomes

1

Description

Joint position sense

Timepoint

Before and after taping

Method of measurement

Photogrammetry

2

Description

Dynamic balance

Timepoint

Before and after taping

Method of measurement

Y balance test

3

Description

Postural control

Timepoint

Before and after taping

Method of measurement

Foot pressure

Intervention groups

1

Description

Intervention group 1: Kinesio tape. In this condition, kinesio tape is applied to the knee. Then the evaluations are done.

Category

Other

2

Description

Intervention group 2: Dynamic tape: In this condition the dynamic tape is applied to the knee. Then the evaluations are done.

Category

Other

3

Description

Control group: Control group: evaluations are done in control conditions (without tape).

Category

N/A

Recruitment centers

1

Recruitment center

Name of recruitment center

Bu-ali Sina university

Full name of responsible person

Ali Yalfani

Street address

Bu-Ali Sina University, Shahid Mostafa Ahmadi Roshan Street

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Bu Ali-Sina University

Full name of responsible person

Arash Ghorbani

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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

Bu Ali-Sina University

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

Bu Ali-Sina University

Full name of responsible person

Ali Yalfani

Position

Professor

Latest degree

Ph.D.

Other areas of specialty/work

Rehabilitation management

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Person responsible for scientific inquiries

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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

Not applicable

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

Not applicable

Data Dictionary

Not applicable