Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

The Comparison efficacy of exercise therapy with and without Kinesio taping on pain, and electromyography muscle activity in the female with patellofemoral pain syndrome

Protocol summary

Study aim

The aim of the present study was to compare the effect of 8-week exercise therapy with and without Kinesio taping on pain and onset activation levels of the Vastus Medialis (VM) relative to the Vastus Lateralis (VL) in the female with Patellofemoral Pain Syndrome (PFPS).

Design

The present study is semi-experimental. The statistical population of this study was 20-30-year-old women with patellofemoral pain that referring to physiotherapy medical clinic. A total of 30 women suffering from PFPS were included in this study and randomly assigned to two groups of exercises therapy and exercises therapy with Kinesio type.

Settings and conduct

This semi-experimental study was conducted at Sports Medicine Rehabilitation Laboratory of Bu-Ali Sina University. Subjects were evaluated at the baseline and after eight weeks of intervention. All subjects participating in this study were unaware of other groups. Our collaborators in the lab and coworker analytics sections worked blindly with no background in this study.

Participants/Inclusion and exclusion criteria

Inclusion criteria: History of pain in the anterior part of the knee for 6 months. Having 20 to 40-year-old. Exclusion criteria: A History of the patella dislocated. History of the ligament rupture, meniscus, and knee joint capsule injury. History of lower limb surgery. Pain in the hip and ankle joint.

Intervention groups

The exercise therapy group carries out special exercises for pain syndrome. The exercise therapy with Kinesio taping carries out special exercises for patellofemoral pain syndrome when applying to tape on the knee joint.

Main outcome variables

Pain, Onset activation levels of the Vastus Medialis (VM) relative to the Vastus Lateralis (VL)

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20181002041203N1**
Registration date: **2018-11-22, 1397/09/01**
Registration timing: **retrospective**

Last update: **2018-11-22, 1397/09/01**
Update count: **0**

Registration date

2018-11-22, 1397/09/01

Registrant information

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Name of organization / entity
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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2017-10-07, 1396/07/15

Expected recruitment end date

2017-11-21, 1396/08/30

Actual recruitment start date

2017-10-07, 1396/07/15

Actual recruitment end date

2017-11-21, 1396/08/30

Trial completion date

2018-07-11, 1397/04/20

Scientific title
The Comparison efficacy of exercise therapy with and without Kinesio taping on pain, and electromyography muscle activity in the female with patellofemoral pain syndrome

Public title
The effects of Kinesio taping and exercise therapy in the treatment of patellofemoral pain syndrome

Purpose
Supportive

Inclusion/Exclusion criteria

Inclusion criteria:
Knee pain during up and down stairs Not having a history of surgery in lower extremity Positive results for Clark test and Apprehension Patella test

Exclusion criteria:
Patella dislocation history History of lower limb surgery History of ligament rupture, meniscus and knee joint capsule injury Pain in hip and ankle joint

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

Gender
Female

Phase
N/A

Groups that have been masked

- Participant
- Care provider
- Outcome assessor
- Data analyser

Sample size
Target sample size: **45**
Actual sample size reached: **45**

Randomization (investigator's opinion)
Randomized

Randomization description
Subjects were randomly assigned to study groups. At the baseline, sealed envelopes were prepared by the researcher. The inside of envelopes contained the name of study groups (experimental or control group) which each subject should randomly select and picked one. Then after opening the envelopes, the subject was allocated to the groups.

Blinding (investigator's opinion)
Double blinded

Blinding description
All subjects participating in this study were unaware of other groups. The laboratory manager who was responsible for doing all the tests neither knew subjects grouping nor talk with them in this regard. The research colleague who has done the data analyzing were also unaware of subjects grouping.

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Ethics committee of Hamedan University of Medical Sciences

Street address
Khaje Rashid Crossroads - Ayatollah Kashani Blvd.

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Hamedan

Province
Hamadan

Postal code
6517838696

Approval date
2018-02-24, 1396/12/05

Ethics committee reference number
IR.UMSHA.REC.1396.842

Health conditions studied

1

Description of health condition studied
Patellofemaoral pain syndrome

ICD-10 code
M22.2

ICD-10 code description
Patellofemoral disorders

Primary outcomes

1

Description
Felling pain in knee

Timepoint
In baseline and after 8 weeks training

Method of measurement
The pain intensity measured by Visual Analog Scale.

2

Description
Delayed onset of electromygraphic activity of vastus medialis relative to vastus lateralis

Timepoint
In baseline and after 8 weeks intervention

Method of measurement
Electromyography muscle activity was assessed by Mega Win ME6000 device.

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group 1: exercise therapy. Patients in this group performed selective exercises for patellofemoral pain syndrome three times a week for eight weeks. The exercise programme includes warm-up, strengthening and stretching exercises.
Category
Rehabilitation

2

Description
Intervention group 2: exercise therapy with Kinesio taping. In this group before training , for each subject knee taping perform with Kinesio tape. after that patient performed selective exercises for patellofemoral pain syndrome three times a week for eight weeks. The 3NS TEX Kinesio type was used in this study. The training program was similar to intervention group 1.
Category
Rehabilitation

3

Description
Control group: daily routine activities. In the control group, subjects did not receive intervention within eight weeks.
Category
Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Be'sat hospital
Full name of responsible person
Amirhosein Yazdani
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Sponsors / Funding sources

1

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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
The University of Bu-Ali Sina
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
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Sharing plan

Deidentified Individual Participant Data Set (IPD)
Yes - There is a plan to make this available

Study Protocol
Yes - There is a plan to make this available

Statistical Analysis Plan
Yes - There is a plan to make this available

Informed Consent Form
Yes - There is a plan to make this available

Clinical Study Report
Yes - There is a plan to make this available

Analytic Code
Not applicable

Data Dictionary
Not applicable

Title and more details about the data/document
The main information will be shared with readers.

When the data will become available and for how long
Six months to one year after the publication of the relevant articles

To whom data/document is available
Academic researchers

Under which criteria data/document could be used
If the corresponding author discretion

From where data/document is obtainable
Ali Yalfani

What processes are involved for a request to access data/document
According to the author's opinion, the file data can be shared.

Comments