Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Comparison of efficiency of McConnell and kinesiology taping with Mc Connell method in patients with patellofemoral pain syndrome (PFPS)

Protocol summary

Summary

Design: experimental randomized control trial. Participants: recruitment of patellofemoral pain syndrome patients will be among patients referred to orthopedics department. The inclusion criteria: anterior or retro patellar pain, insidious in nature, which was aggravated by at least two of the following common functional activities of daily life: prolonged sitting, stair climbing, squatting, running, kneeling, hopping / jumping. Exclusion criteria: any traumatic, inflammatory, infectious pathology or osteoarthritis in the lower extremity. Sample size: a pilot study would be conducted to estimate the size of each study group. Intervention: subjects in control group will be instructed to perform strengthening exercises employed at home. These include isometric vastus medialis oblique contraction, squatting and isometric hip abduction. In addition, stretching exercises include hamstrings muscles stretch and anterior hip structures stretch. Each exercise will be performed twice daily for 6 weeks. For one of the experimental groups in addition to the exercises, McConnell tape (Sterotape, Steroplast Ltd Bredburg, Cheshire, England) will immediately be attached over the affected patellar region, in the order of medial glide. For second experimental group in addition to the exercises, kinesiology taping (NASARA, 28, 139beon-gil, Soraji-ro, Paju-si, Gyeonggi-do, KOREA413-832), as the first group, will be attached over the affected patellar region. Outcome measures will be assessed at baseline and at the end of treatment. Primary outcome measures are functional limitation and disability that will be measured with modified functional index questionnaire (MFIQ) and kujala patellofemoral scale (KPFS). Patellofemoral pain will be measured with visual analog scale (VAS).

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2016040827287N1**
Registration date: **2016-05-27, 1395/03/07**
Registration timing: **retrospective**

Last update:
Update count: **0**

Registration date

2016-05-27, 1395/03/07

Registrant information

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Javid Mostamand

Name of organization / entity

Isfahan University of Medical Sciences

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Recruitment status

Recruitment complete

Funding source

Isfahan University Of Medical Sciences

Expected recruitment start date

2014-11-22, 1393/09/01

Expected recruitment end date

2015-09-23, 1394/07/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of efficiency of McConnell and kinesiology taping with Mc Connell method in patients with patellofemoral pain syndrome (PFPS)

Public title
comparison of two taping methods in patellofemoral pain syndrome
Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria: age less than 40 years old; anterior or retro patellar pain, insidious in nature, which was aggravated by at least two of the following common functional activities of daily life: prolonged sitting, stair climbing, squatting, running, kneeling, hopping/ jumping; persistence for at least 3 months; lateral glide of patella; Exclusion criteria: any traumatic, inflammatory or infectious pathology in the lower extremity; dislocation and subluxation in the patellofemoral joint; history of surgery in the knee joint; any signs of secondary osteoarthritis in the knee joint; skin disorder or allergy after 24 hours; any deformity and fracture in the knee joint or lower extremity
Age
To **40 years** old
Gender
Both

Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: **36**
Randomization (investigator's opinion)
Randomized
Randomization description
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
Isfahan University of Medical Sciences
Street address
Isfahan University of Medical Sciences, Hezar jarib street, Isfahan, Iran
City
Isfahan
Postal code
81746-73461
Approval date
2014-09-25, 1393/07/03
Ethics committee reference number
393549

Health conditions studied

1

Description of health condition studied
Patellofemoral pain syndrome
ICD-10 code
M22.4
ICD-10 code description
Chondromalacia patellae

Primary outcomes

1

Description
Pain
Timepoint
Pre intervention, after intervention
Method of measurement
Visual Analog Scale

2

Description
Disability
Timepoint
Pre intervention, after intervention
Method of measurement
Kujala Patellofemoral Scale

3

Description
Functional limitation
Timepoint
Pre intervention, after intervention
Method of measurement
Modified Functional Index Questionnaire

Secondary outcomes

empty

Intervention groups

1

Description
For Mc Connell group, McConnell tape will immediately be attached over the affected patellar region, in the order of medial glide according to patellar orientation tests. The choice of taping methods is partly based on assessment of the patellar position and partly on the attainment of pain reduction. It will be expected that appropriate taping should improve patient symptoms immediately and reduce the pain by at least 50% during provocative activities. To control lateral glide, one end of the tape is secured to the lateral patellar (knee cap) border and the therapist (patient) glides the patella

medially with thumb while maintaining tension in the tape. Then, he/she lifts the medial soft tissue (skin) toward the patella so that several skin folds appears, and secures the tape medially and across the knee. Subjects will be instructed apply the taping corrections and reapply the tape daily and wear the tape during all waking hours for the duration of the trial. Subjects will be instructed to perform strengthening exercises employed at home. These include isometric vastus medialis oblique contraction while sitting with knee at 90 degree of flexion, squat to 30 degree of knee flexion and isometric hip abduction against the wall while patient will stand side- on to a wall. The leg closest to the wall is flexed at the knee so the foot is off the ground. The hips are in line with each other. The patient should have all the weight back through the heel of the standing leg, which is slightly flexed. The patient externally rotates the standing leg without turning the foot, the pelvis, or the shoulders. The patient should sustain the contraction for 20 seconds, until a burning can be felt in the gluteus medius region (4 sets of 10 repetitions). In addition, stretching exercises including hamstrings muscles stretch and anterior hip structures stretch in prone position and one hip externally rotated with both the hip and knee flexed (3 repetitions of 30 seconds each) will be recommended to perform at home. Each exercise will be performed twice daily for 6 weeks.

Category

Treatment - Devices

2

Description

Kinesiology group: kinesiology tape as the McConnell tape will be attached over the affected patellar region, in the order of medial glide. To control lateral glide, one end of the tape is secured to the lateral patellar (knee cap) border and the therapist (patient) glides the patella medially with thumb while maintaining tension in the tape. Then, he/she lifts the medial soft tissue (skin) toward the patella so that several skin folds appears, and secures the tape medially and across the knee. Subjects will be instructed apply the taping corrections and reapply the tape daily and wear the tape during all waking hours for the duration of the trial. Subjects will be instructed to perform strengthening exercises employed at home. These include isometric vastus medialis oblique contraction while sitting with knee at 90 degree of flexion, squat to 30 degree of knee flexion and isometric hip abduction against the wall while patient will stand side- on to a wall. The leg closest to the wall is flexed at the knee so the foot is off the ground. The hips are in line with each other. The patient should have all the weight back through the heel of the standing leg, which is slightly flexed. The patient externally rotates the standing leg without turning the foot, the pelvis, or the shoulders. The patient should sustain the contraction for 20 seconds, until a burning can be felt in the gluteus medius region (4 sets of 10 repetitions). In addition, stretching exercises including hamstrings muscles stretch and anterior hip structures stretch in prone position and one hip externally rotated with both the hip and knee flexed (3 repetitions of 30 seconds each) will be recommended to perform at home. Each exercise will be performed twice daily for 6 weeks.

Category

Treatment - Devices

3

Description

Control group: subjects in control group will be instructed to perform strengthening exercises employed at home. These include isometric vastus medialis oblique contraction while sitting with knee at 90 degree of flexion, squat to 30 degree of knee flexion and isometric hip abduction against the wall while patient will stand side- on to a wall. The leg closest to the wall is flexed at the knee so the foot is off the ground. The hips are in line with each other. The patient should have all the weight back through the heel of the standing leg, which is slightly flexed. The patient externally rotates the standing leg without turning the foot, the pelvis, or the shoulders. The patient should sustain the contraction for 20 seconds, until a burning can be felt in the gluteus medius region (4 sets of 10 repetitions). In addition, stretching exercises including hamstrings muscles stretch and anterior hip structures stretch in prone position and one hip externally rotated with both the hip and knee flexed (3 repetitions of 30 seconds each) will be recommended to perform at home. Each exercise will be performed twice daily for 6 weeks.

Category

Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Physiotherapy clinic of rehabilitation school of Isfahan University of Medical Sciences

Full name of responsible person

Fatemeh Rezaeian Ramsheh

Street address

Rehabilitation school, Isfahan University of Medical Sciences

City

Isfahan

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Isfahan University of Medical Sciences

Full name of responsible person

Mehdi Nematbakhsh

Street address

Hezar jarib street

City

Isfahan

Grant name

Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Isfahan 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

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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