Clinical Trial Protocol
Iranian Registry of Clinical Trials

11 Sep 2026

Comparative Effects of McConnell Taping and Kinesio Taping on Pain and Gait Parameters in Patients with Patellofemoral Pain Syndrome

Protocol summary

Study aim

Primary purpose of this research to investigate the effects of the McConnell taping on pain and gait parameters with patello-femoral pain syndrome To investigate the effects of the Kinesio taping on pain and gait parameters with patello-femoral pain syndrome To compare the effects of the Kinesio taping and the McConnell taping on pain and gait parameters with the patello-femoral pain syndrome such pain, activities, gait parameters, and cadence.

Design

Randomized clinical trial

Settings and conduct

Study 'll be conduct in Allied Hospital, District HQ Hospital, Madinah Teaching Hospital Faisalabad

Participants/Inclusion and exclusion criteria

INCLUSION CRITERIA Age 20-40 Persons those are experiencing the knee pain anteriorly Pain at worst once, within the last three months in two or more movements throughout prolonged squatting, sitting, stair climbing, kneeling, running, and jumping Unilateral(one sided) PFPS BMI 20 to 32 kg Patellar apprehension test EXCLUSION CRITERIA History of subluxation moreover dislocation of the patella Surgery of Lower extremity (LE) within the last year Due to damage of neurological damage, Sensory or motor paralysis On anterior knee pain scale, score of 80 or high Meniscal injury Osteoarthritis of Knee joint old fractures in the knee region with or without internal fixation tendon pathology of patella Any deformities of lower limb Pain is referred from the area of spine

Intervention groups

Both group MT group and KT group will receive McConnell taping & Kinesio taping with baseline treatment stretching, strengthening as well as patellar mobilizatio

Main outcome variables

pan, activities, gait parameters and cadence

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20230706058701N1**
Registration date: **2023-08-08, 1402/05/17**
Registration timing: **retrospective**

Last update: **2023-08-08, 1402/05/17**
Update count: **0**

Registration date

2023-08-08, 1402/05/17

Registrant information

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Name of organization / entity

The University of Faisalabad

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2023-03-28, 1402/01/08

Expected recruitment end date

2023-06-15, 1402/03/25

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title
Comparative Effects of McConnell Taping and Kinesio Taping on Pain and Gait Parameters in Patients with Patellofemoral Pain Syndrome

Public title
McConnell Taping and Kinesio Taping on Pain and Gait Parameters in Patients with Patellofemoral Pain Syndrome

Purpose
Treatment

Inclusion/Exclusion criteria

Inclusion criteria:
Age 20-40 Persons those are experiencing the knee pain anteriorly Pain at worst once, within the last three months in two or more movements throughout prolonged squatting, sitting, stair climbing, kneeling, running, and jumping Unilateral PFPS BMI 20 to 32 kg Patellar apprehension test

Exclusion criteria:
History of subluxation moreover dislocation of the patella Surgery of Lower extremity (LE) within the last year Due to damage of neurological damage, Sensory or motor paralysis On anterior knee pain scale, score of 80 or high Meniscal injury Osteoarthritis of Knee joint old fractures in the knee region with or without internal fixation tendon pathology of patella Any deformities of lower limb Pain is referred from the area of spine

Age
From **20 years** old to **40 years** old

Gender
Both

Phase
N/A

Groups that have been masked

- Participant
- Investigator

Sample size
Target sample size: **30**

Randomization (investigator's opinion)
Randomized

Randomization description
As per the inclusion and exclusion criteria of the study , patients will be divided into two groups randomly by Random lottary method. The randomization process in this study followed a simple randomization method at the individual level. The unit of randomization was the individual participant, meaning that each participant was randomly assigned to either the MT group or the KT group.

Blinding (investigator's opinion)
Double blinded

Blinding description
The patients taking part in the study would be blinded, they would not be able to know the group they have been allocated to, either McConnell taping and Kinesio taping. Principal investigator, who is responsible for the overall conduct and supervision of the study, is also blinded in a double□blind trial. In investigator-initiated trials, the principal investigator may have a vested interest in the study outcomes. By blinding the principal investigator, the risk of conscious or unconscious bias in data interpretation and analysis is minimized.

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
The University of Faisalabad

Street address
Canal road Faisalabad

City
Faisalabad

Postal code
38610

Approval date
2023-03-25, 1402/01/05

Ethics committee reference number
TUF/Addl Reg/SB/355

Health conditions studied

1

Description of health condition studied
Patellofemoral Pain Syndrome (PFPS) is an umbrella term used for pain arising from the Patellofemoral joint itself, or adjacent soft tissues. It is a chronic condition that tends to worsen with activities such as squatting, sitting, climbing stairs, and running. Historically it has been referred to as anterior knee pain but this is misleading as the pain can be felt in all aspects of the knee (including the popliteal fossa). Symptoms can develop slowly over time or brought on acutely. PFP tends to reoccur after 2 years in 40% of cases.

ICD-10 code
M22.2X

ICD-10 code description
Patellofemoral disorders

Primary outcomes

1

Description
Primary outcomes is Pain

Timepoint
Measure by Visual Analogue Scale (VAS)

Method of measurement
The Visual Analogue Scale (VAS) measures pain intensity. The VAS consists of a 10cm line, with two end points representing 0 ('no pain') and 10 ('pain as bad as

it could possibly be'). Ask the patient to rate their current level of pain by placing a mark on the line.

2

Description

Activities

Timepoint

Activities measure by Kujala/Anterior Knee Pain Scale (AKPS)

Method of measurement

The Kujala Score or Anterior Knee Pain Scale (AKPS) is a 13-item self-report questionnaire that assesses subjective reactions to particular activities and symptoms that are known to correlate with anterior knee pain syndrome. The AKPS is graded on a scale of 0 to 100, with 100 being the highest possible score.

3

Description

Gait parameters (cadence)

Timepoint

Gait parameters by Rivermead Visual gat assessment form, (cadence) measure by Stopwatch

Method of measurement

Rivermead Visual Gait Assessment is regarded as the most clinically helpful measurement since it evaluates the kinematic component of gait abnormalities.The clinical and economically method of visual gait observation is particularly helpful in identifying walking abnormalities.It consists of 20 items that measure the deviations on the affected side over 2 arms, 11 stance phases, and 7 swing phases. Each question is graded on a four-point scale with a range of 0 to 3 (normal value = 0, mild deviation value = 1, moderate deviation value = 2, and severe deviation value = 3). The overall score ranges from 0 (normal gait) to 59 (severely altered gait) because only item 2 is rated up to significant alteration (21). A stopwatch is a timing tool used to measure the passing of time. It is also employed to assess cadence, which refers to the frequency of steps or strides taken during activities like walking or jogging. By counting the number of steps within a designated timeframe, typically a minute, a stopwatch provides a convenient method for monitoring cadence. While there are more advanced wearable devices for precise cadence measurements, a stopwatch can still provide approximate measurements when such technology is not available.

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: Group A McConnell Taping: Taping was performed on the participants in the MT group while the patella is pulled medially. It started at the middle of the lateral border, then carried over the front of the patella and finally attached to the middle of the medial border of the medial hamstring tendons. The medial soft tissues shift down the medial femoral condyle and towards the patella in order to provide a more secure fixation (15).The patient was lying on his or her side with the extended leg and the thigh muscles are just relaxed when the tape was applied. Several strips of hypo-allergenic tape were applied throughout the region of knee to Antero-posterior tilt and medial glide: The tape was applied to the knee's lateral surface at the level of the patella's tops facet. cover the patella and the medial and lateral knee regions before each piece of rigid tape was applied.As the tape was pushed medially, the skin on the medial side of the knee was gradually raised towards the patella. Short of the hamstring, the tape was fastened to the medial side of the knee (17). After the medial correction, McConnell taping with the weight bearing on the lower leg demonstrated that neither the patellofemoral joint's area of contact nor the patella's alignment were altered by the tape method.The McConnell taping technique improves dynamic balance, increases the activating of the (Vastus Medialis Obliquus) compared to the (Vastus Lateralis muscles), and corrects patellar alignment in addition to reducing pain during activity (43).

Category

Treatment - Other

2

Description

Intervention group: Group B Kinesio Taping : Before beginning the taping process, alcohol was used to disinfect the skin. The position of patient was in the supine position, the taping was done with the 30 degrees hip flexed and 50 degrees knee flexed. The first part of adhesive tape was at the linea aspera medial lip since here is where the VM begins. After that, it will attach this to the side middle of patellar_tendon, as well as serves as the putting point for the VM (34).On the quadriceps femoris muscle, kinesio tape was applied using a tonus regulation technique, commonly known as muscle technique.We observed the tape length with the tissue stretched to its maximum extent.In a supine position, the individual was advised to extend their leg as far as possible below the bed, and the starting end of a Y-shaped of tape was attached to the middle of the thigh, 5 cm below the line of the inguinal region. Alongside the knee joint in a place of 90* flexion, the tape was fastened along a line that went above the kneecap, and the split end's two tips were fastened to the kneecap and wrapped around it (17). By stimulating the cutaneous mechan-o-receptors and boosting afferent signals to the central nervous system, KT can significantly reduce pain. Additionally, according to , KT elevates the skin and encourages blood and lymph flow. Additionally, it is believed to support joint health and muscle repair.Additionally, KT may improve emotional stability and self-assurance, which can lead to improved performance. It is thought that KT regulates muscle tone, activates skin afferent receptors, and has an impact on how muscles work. Better limb strength can result from these elements in turn. By attracting muscle spindles via

the sensorimotor pathway, KT can also enhance muscular tone. One of the theories behind KT is that it strengthens proprioceptive sensibility to assist weak muscles, enhancing muscular function, reducing discomfort, realigning subluxated joints, and promoting blood and lymph circulation (44).

Category
Treatment - Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Allied Hospital Faisalabad
Full name of responsible person
Sobia Nawaz
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Jail Road adjacent to Faisalabad Medical University, Near Sargodha Road, Faisalabad.
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3

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Sponsors / Funding sources

1

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Grant name
no
Grant code / Reference number
no
Is the source of funding the same sponsor organization/entity?
No
Title of funding source
my parents supporting me
Proportion provided by this source
100
Public or private sector
Private
Domestic or foreign origin
Domestic
Category of foreign source of funding
empty
Country of origin
Type of organization providing the funding
Other

Person responsible for general inquiries

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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
Yes - There is a plan to make this available
Data Dictionary
Yes - There is a plan to make this available
Title and more details about the data/document
Comparative effects of McConnell Taping and Kinesio Taping on pain and gait parameters in patients with Patellofemoral pain syndrome
When the data will become available and for how long
Data will be available after the completion of study and will remain available till 6 months
To whom data/document is available
Data will be available for other people almost 6 months after the completion of study
Under which criteria data/document could be used
The data/document could be used by communicating with the principle investigator Ayesha Aslam gmail : ayeshaaslam7625@gmail.com
From where data/document is obtainable
Ayesha Aslam gmail : ayeshaaslam7625@gmail.com
What processes are involved for a request to access data/document
The data/document could be used by communicating with the principle investigator Ayesha Aslam ayeshaaslam7625@gmail.com
Comments