

Clinical Trial Protocol

Iranian Registry of Clinical Trials

27 Jul 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

Name

Ayesha Aslam

Name of organization / entity

The University of Faisalabad

Country

Pakistan

Phone

+92 41 8750971

Email address

ayeshaaslam7625@gmail.com

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 lottery 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 gait 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 mechanoreceptors 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

Street address

Jail Road adjacent to Faisalabad Medical University,
Near Sargodha Road, Faisalabad.

City

Faisalabad

Postal code

38800

Phone

+92 331 7240977

Email

sobia.nawaz56@gmail.com

Web page address

2

Recruitment center

Name of recruitment center

Madinah Teaching Hospital

Full name of responsible person

Dr.Kishwar

Street address

Sargodha Rd, University Town, Faisalabad, Punjab

City

Faisalabad

Postal code

38800

Phone

+92 333 6526682

Email

kishwarbatool922@gmail.com

3

Recruitment center

Name of recruitment center

District HQ Faisalabad

Full name of responsible person

Shaista Bano

Street address

Mall Road, Faisalabad, Punjab

City

Faisalabad

Postal code

6543

Phone

+92 321 7240865

Email

banoshaista00@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

The University of Faisalabad

Full name of responsible person

Ayesha Aslam

Street address

Neighban pura street no.1,Faisalabad

City

Faisalabad

Postal code

38610

Phone

+92 308 2973775

Email

ayeshaaslam7625@gmail.com

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

Contact

Name of organization / entity

The University of Faisalabad

Full name of responsible person

Ayesha Aslam

Position

Student

Latest degree

Medical doctor

Other areas of specialty/work

Physiotherapy

Street address

Neighban pura street no.1, block C Faisalabad

City

Faisalabad

Province
Punjab
Postal code
38610
Phone
+92 308 2973775
Email
ayeshaaslam7625@gmail.com

Person responsible for scientific inquiries

Contact

Name of organization / entity
The University of Faisalabad
Full name of responsible person
Rabia Khan
Position
Doctor
Latest degree
Medical doctor
Other areas of specialty/work
Physiotherapy
Street address
Abdullah Colny Faisalabad
City
Faisalabad
Province
Punjab
Postal code
2353
Phone
+92 308 4558383
Email
rabisandhu4549@gmail.com

Person responsible for updating data

Contact

Name of organization / entity
The University of Faisalabad
Full name of responsible person
Tahreem Naz
Position
Consultant
Latest degree
Medical doctor
Other areas of specialty/work
Physiotherapy
Street address

Gulamabad Faisalabad
City
Faisalabad
Province
Punjab
Postal code
3433
Phone
+92 301 7122566
Email
dr.tahreemnaz@gmail.com

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