

Clinical Trial Protocol

Iranian Registry of Clinical Trials

11 Sep 2026

OUTCOME COMPARISON OF ULTRASOUND GUIDED DRY NEEDLING IN ADDITION TO CONVENTIONAL PHYSICAL THERAPY FOR TREATMENT OF PATIENTS WITH JUMPER'S KNEE

Protocol summary

Study aim

To compare the outcomes of ultrasound guided dry needling in addition to conventional physical therapy on patellar tendonitis, tendon thickness, tendon width, fibrillar echo-pattern and echogenicity of patellar tendon in patients with jumper's knee.

Design

parallel group, single blinded, randomized controlled trial

Settings and conduct

The institute of physical therapy, The university of Lahore

Participants/Inclusion and exclusion criteria

inclusion criteria: Athletes with medical diagnosis of Jumper's knee. Aged between 18 to 45 years. Both genders. A score below 80 on the Victorian Institute of Sports Assessment for PT (VISA-P) questionnaire. Pain provocation on Single leg decline squat test as a score >0 on the NRS. Exclusion Criteria: Knee surgery within the previous 6 months. Chronic knee joint diseases. Corticosteroid injection in the patellar tendon within the last 1 month. Contraindications for needling. Presence of calcification. Use of analgesics for last 48 hours. Any other concomitant treatment for jumper's knee.

Intervention groups

(Experimental group); it will receive ultrasound guided dry needling(three needle insertions lasting 3 seconds each and the number of times the needle will pass through the tendon will range from 15 to 30 passes, depending on the size of the tendon abnormality) in addition to routine physical therapy.(An exercise program will consist of stretching and strengthening exercises of quadricep & hamstring: mini-squats, seated knee extensions, lunges, and lateral steps (3 sets, 15 reps each) & therapeutic modalities) and activity modifications. control group will receive same routine physical therapy intervention as of group A

Main outcome variables

Visual analogue scale, Victorian Institute of Sport Assessment Patellar(VISA-P) Score, The Knee Injury and Osteoarthritis Outcome Score (KOOS), Lysholm score , Sonographic tendon assessment

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20210409050913N1**

Registration date: **2021-04-17, 1400/01/28**

Registration timing: **prospective**

Last update: **2021-04-17, 1400/01/28**

Update count: **0**

Registration date

2021-04-17, 1400/01/28

Registrant information

Name

Faiza Sharif

Name of organization / entity

The university of lahore

Country

Pakistan

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Email address

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2021-05-01, 1400/02/11

Expected recruitment end date

2021-10-01, 1400/07/09

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

OUTCOME COMPARISON OF ULTRASOUND GUIDED DRY NEEDLING IN ADDITION TO CONVENTIONAL PHYSICAL THERAPY FOR TREATMENT OF PATIENTS WITH JUMPER'S KNEE

Public title

ultrasound guided dry needling for jumper's knee

Purpose

Treatment

Inclusion/Exclusion criteria**Inclusion criteria:**

Athletes with medical diagnosis of patellar tendinopathy and anterior knee pain located on the inferior pole of the patella for over 1 month. The intensity of pain of 3.0 or greater on a 0-to-10 visual analog scale while walking up and down stairs and high pain intensity in single leg decline squat test. Palpation tenderness of the superior insertion of the patellar tendon. Athletes of either genders Age ranges between 18 to 45 years. A score below 80 on the Victorian Institute of Sports Assessment for PT (VISA-P) questionnaire. Pain provocation on Single leg decline squat test as a score >0 on the NRS.

Exclusion criteria:

Knee surgery within the previous 6 months. Chronic knee joint diseases. Corticosteroid injection in the patellar tendon within the last 1 month. Contraindications for needling such as allergies/sensitivities, diseases/conditions, implants, areas of acute inflammation, acute systemic infections, on blood thinner or anticoagulants, with known history of bleeding disorders. Presence of multiple focal areas of calcification within the proximal tendon or radiographic fractures around the knee. Use of analgesics for last 48 hours. Any other concomitant treatment for jumper's knee.

Age

From **18 years** old to **45 years** old

Gender

Both

Phase

2

Groups that have been masked

- Outcome assessor

Sample size

Target sample size: **96**

Randomization (investigator's opinion)

Randomized

Randomization description

The patients having diagnosed Jumper's knee will be recruited in the study by convenient sampling, and the patients who fulfill the inclusion and exclusion criteria will be selected, with similar baseline characteristics. The consent will be taken from the subjects to participate in the study. It will be a single blinded trial in which the

assessor will be kept blind. The subjects will be randomly assigned to one of two groups by using a table of random numbers generated the randomization sequence, using a restricted randomization scheme to assure equal numbers in each group. Random allocation to all groups will be ensured, from all study personnel and participants by entry of data into computer randomization program immediately. Group assignments will be sealed in opaque envelopes and opened sequentially by the investigators.

Blinding (investigator's opinion)

Single blinded

Blinding description

It will be a single blinded trial in which the assessor will be kept blind. Assessor will be senior physiotherapist who will take measurements after giving consent to participate in the study. He will be blind, not confirmed about the group of intervention

Placebo

Not used

Assignment

Parallel

Other design features

Parallel groups, single blinded, single setting

Secondary Ids

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

Institutional Review Board Committee

Street address

1-km defence road, off bhoptian chowk, Lahore
Pakistan

City

Lahore

Postal code

0544

Approval date

2021-02-11, 1399/11/23

Ethics committee reference number

IRB-UOL-FAHS/829-I/2021

Health conditions studied**1****Description of health condition studied**

Jumper's knee

ICD-10 code

M76.5

ICD-10 code description

Patellar tendinitis

Primary outcomes

1

Description

pain intensity

Timepoint

baseline, 1st, 2nd, and 4th week after the intervention

Method of measurement

Visual analogue scale

Secondary outcomes

1

Description

functional disability

Timepoint

baseline, 1st, 2nd and 4th week after the intervention

Method of measurement

VISA-P Score, KOOS Score, Lysholm score

Intervention groups

1

Description

Intervention group: Ultrasound guided dry needling in addition to routine physical therapy. each session of ultrasound guided dry needling will consist of three needle insertions lasting 3 seconds each and the number of times the needle will pass through the tendon will range from 15 to 30 passes, depending on the size of the tendon abnormality. Routine physiotherapy treatment will be administered to the patients which includes these:

- An exercise program will consist of stretching and strengthening exercises of quadricep & hamstring: mini-squats, seated knee extensions, lunges, and lateral steps. Each exercise will be conducted in 3 sets of 15 repetitions. Each repetition will begin with the concentric phase, followed by the eccentric phase of the exercise.
- Physiotherapy modalities will include 10 minutes of Heat Therapy by moist hot pack, phonophoresis (pulsed ultrasound) and transverse friction massage.
- The use of knee strap & activity modification

Category

Treatment - Devices

2

Description

Control group: It will be given same routine physical therapy treatment methods given generally to treat such patients for same time

Category

Treatment - Devices

Recruitment centers

1

Recruitment center

Name of recruitment center

University institute of physical therapy,The University

of Lahore

Full name of responsible person

Muhammad Asim Arif

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

The University of Lahore

Full name of responsible person

Ashfaq Ahmad

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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 Lahore

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

Academic

Person responsible for general inquiries

Contact

Name of organization / entity

The University of Lahore

Full name of responsible person

Faiza Sharif

Position

Assistant Professor

Latest degree

Ph.D.

Other areas of specialty/work

Physiotherapy

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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

Not applicable

Analytic Code

Not applicable

Data Dictionary

Undecided - It is not yet known if there will be a plan to make this available

Title and more details about the data/document

all collected IPD for all outcome measures

When the data will become available and for how long

starting in November 2021 6 months after publication

To whom data/document is available

persons in academic institutes and researchers

Under which criteria data/document could be used

it could be used on permission from investigator

From where data/document is obtainable

through email to investigator

faiza.sharif@uipt.uol.edu.pk

What processes are involved for a request to access data/document

through email to investigator

faiza.sharif@uipt.uol.edu.pk and call 0092321 4600797

Comments

data can be provided on request