# Clinical Trial Protocol
# Iranian Registry of Clinical Trials

10 Jun 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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**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
**Street address**
1-km defence road, off bhoptian chowk, Lahore
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## Sponsors / Funding sources

**1**

**Sponsor**
**Name of organization / entity**
The University of Lahore
**Full name of responsible person**
Ashfaq Ahmad
**Street address**
1-km defence road, off bhoptian chowk, Lahore
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ashfaq.ahmad@uipt.uol.edu.pk
**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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## Person responsible for scientific inquiries

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## Person responsible for updating data

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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