Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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
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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
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
The University of Lahore
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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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Person responsible for scientific 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
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