Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Effects of Ultrasound Therapy Versus Transverse Friction Massage along with Eccentric Exercise Program on chronic Achilles Tendinopathy

Protocol summary

Study aim

To determine the effects of Ultrasound Therapy along with Eccentric Exercise Program and Transverse Friction Massage along with Eccentric Exercise Program in chronic Achilles tendinopathy to decrease pain and increase activity of daily living (ADL's) and range of motion (ROM).

Design

single blinded randomized clinical trial, Parallel groups, single setting

Settings and conduct

OPD of Physical Therapy department of City Hospital Jalal Pur Jattan, Gujrat, Pakistan

Participants/Inclusion and exclusion criteria

Inclusion Criteria: Aged 18 to 65 years. Not received any treatment for Achilles tendon within the last 3 months. Achilles pain on at least one of jumping/ landing, running or changing directions. Pain on palpation of Achilles tendon. Victorian Institute of Sport Assessment-Achilles (VISA-A) scale score of >20 and <80 points. Symptoms (pain, inflammation, weakness) sufficient to affect exercise and activity for at least last 6 months. Exclusion Criteria: Clinical signs and symptoms of any pathology other than Achilles tendinopathy e.g. comorbid musculoskeletal conditions like polymyositis, dermatomyositis. Previous Achilles tendon surgery. Injection into ankle joint during last 6 months. Osteoarthritis or Rheumatoid arthritis. Primary and secondary Osteoporosis. Autoimmune disorders. Other conditions that could cause pain in heel pain posteriorly.

Intervention groups

Group A: 36 participants were treated with Transverse Frictional Message along with Eccentric Exercises. Group B: 36 participants were treated with Ultrasonic Therapy along with Eccentric Exercises.

Main outcome variables

Pain Range of motion Functional capability

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20201021049094N1**
Registration date: **2020-11-01, 1399/08/11**
Registration timing: **retrospective**

Last update: **2020-11-01, 1399/08/11**
Update count: **0**

Registration date

2020-11-01, 1399/08/11

Registrant information

Name

Raheela Kousar

Name of organization / entity

The University of Lahore

Country

Pakistan

Phone

+92 53 3589155

Email address

raheelasaleem10@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2019-10-07, 1398/07/15

Expected recruitment end date

2020-03-07, 1398/12/17

Actual recruitment start date

2019-10-10, 1398/07/18

Actual recruitment end date

2020-03-20, 1399/01/01

Trial completion date

2020-03-20, 1399/01/01

Scientific title
Effects of Ultrasound Therapy Versus Transverse Friction Massage along with Eccentric Exercise Program on chronic Achilles Tendinopathy

Public title
Effects of Ultrasound Therapy Versus Transverse Friction Massage along with Eccentric Exercise Program on chronic Achilles Tendinopathy

Purpose
Treatment

Inclusion/Exclusion criteria

Inclusion criteria:
Aged 18 to 65 years. Not received any treatment for Achilles tendon within the last 3 months. Achilles pain on at least one of jumping/ landing, running or changing directions. Pain on palpation of Achilles tendon. Victorian Institute of Sport Assessment-Achilles (VISA-A) scale score of >20 and <80 points. Symptoms (pain, inflammation, weakness) sufficient to affect exercise and activity for at least last 6 months.

Exclusion criteria:
Clinical signs and symptoms of any pathology other than Achilles tendinopathy e.g. comorbid musculoskeletal conditions like polymyositis, dermatomayositis. Previous Achilles tendon surgery. Injection into ankle joint during last 6 months. Osteoarthritis or Rheumatoid arthritis. Primary and secondary Osteoporosis. Autoimmune disorders. Other conditions that could cause pain in heel pain posteriorly.

Age
From **18 years** old to **65 years** old

Gender
Both

Phase
N/A

Groups that have been masked

- Outcome assessor

Sample size
Target sample size: **76**
Actual sample size reached: **76**

Randomization (investigator's opinion)
Randomized

Randomization description
Block, individual randomization with allocation concealment using sealed envelopes. The envelopes contained the slips labeled "TFM" and "US" (equal in number). The individual having TFM slip envelope were assigned the group of Transverse Friction Massage along with Eccentric Exercise. The individual having US slip envelope were assigned the group of Ultrasound Therapy along with Eccentric Exercise.

Blinding (investigator's opinion)
Single blinded

Blinding description
Outcome assessor was masked of treatment given to the participants and group allocation. he was unaware of the group from which the participant come for assessment.

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Secretary Ethical Review Committee

Street address
28-M,Quaid-e-Azam, Industrial Estate, Kot Lakhpat, Lahore.

City
Lahore

Postal code
747-424

Approval date
2019-10-07, 1398/07/15

Ethics committee reference number
Ref. No, RCR & AHS \REC\MS-OMPT\022

Health conditions studied

1

Description of health condition studied
Achilles Tendinopathy is a common clinical pathology causing pain swelling, inflammation and decreased ROM at tendon due to prolonged standing, dysfunction and inflammation of tendon in athletes and common people.

ICD-10 code
M76.6

ICD-10 code description
Achilles Tendinopathy/Tendinitis

Primary outcomes

1

Description
Pain

Timepoint
before, after 3 week, after the intervention

Method of measurement
Numeric Pain Rating Scale

2

Description
Range of Motion

Timepoint
before, after 3 week, after the intervention

Method of measurement
Goniometer

3

Description
Functional capablity
Timepoint
before, after 3 week, after the intervention
Method of measurement
Victorian Institute of Sport Assessment-Achilles Questionnaire (VISA-A)

Secondary outcomes

empty

Intervention groups

1

Description
Intervention no. 1: (Group A) participants were treated with Transverse Frictional message along with Eccentric exercises. Unilateral, heavy-load, eccentric plantarflexion training program for 6 sets of 15 repetitions, twice per day, 7 days per week, performed on a step and individually target the gastrocnemius and soleus by being performed (for 3 sets) with the knee held in extension, and (for 3 sets) in slight knee flexion. TFM was applied over a 3cm- 5cm rectangular area for approximately 3 min medial-to-lateral over TA by thumb. at the rate of 0.5Hz.
Category
Treatment - Devices

2

Description
Intervention no. 2: (Group B) participants were treated with ultrasonic therapy along with Eccentric exercises. Unilateral, heavy-load, eccentric plantarflexion training program for 6 sets of 15 repetitions, twice per day, 7 days per week, performed on a step and individually target the gastrocnemius and soleus by being performed (for 3 sets) with the knee held in extension, and (for 3 sets) in slight knee flexion. Participants in the Ultrasound group received US consisting of a 2ms burst of 1.0MHzsine waves repeating at 100 Hz.
Category
Treatment - Devices

Recruitment centers

1

Recruitment center
Name of recruitment center
Physiotherapy department, City Hospital, Jalal Pur Jattan, Gujrat, Pakistan
Full name of responsible person
Raheela Kousar
Street address
City hospital, Tanda Chowk Jalal Pur Jattan, district Gujrat
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Email
raheelasaleem10@gmail.com

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Riphah college of Rehabilitation and Allied Health science Lahore
Full name of responsible person
Shakeel ur Rehman
Street address
Madar-e-Millat Road, Quaid-e-Azam Industrial Estate Quaid e Azam Industrial Estate, Lahore, Punjab, Pakistan
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Email
shakil.urrehman@riphah.edu.pk
Grant name
Grant code / Reference number
Raheela Kousar
Is the source of funding the same sponsor organization/entity?
No
Title of funding source
Riphah College of Rehabilitation and Allied health Sciences
Proportion provided by this source
50
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, Chenab Campus, Gujrat
Full name of responsible person
Raheela Kousar
Position
Lecturer
Latest degree
Master

Other areas of specialty/work
Physiotherapy
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City hospital, tanda chowk, jalal pur jattan, gujrat
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Person responsible for scientific inquiries

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Person responsible for updating data

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Position
Lecturer
Latest degree
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Jalal Pur Jattan
Province
punjab
Postal code
50780, 50670
Phone
+92 53 3589155
Email
raheelasaleem10@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
Undecided - It is not yet known if there will be a plan to make this available
Title and more details about the data/document
EFFECTS OF ULTRASOUND THERAPY VERSUS TRANSVERSE FRICTION MASSAGE ALONG WITH ECCENTRIC EXERCISE PROGRAM ON CHRONIC ACHILLES TENDINOPATHY
When the data will become available and for how long
study is completed and become available after its publication
To whom data/document is available
person in clinical/academic field. Patient data will not be shown.
Under which criteria data/document could be used
under the usage with terms in which journal is accessed /processed for publication it could be used in request.
From where data/document is obtainable
+923207866611 from the University office and Responsible supervisor and from journal we will process in future
What processes are involved for a request to access data/document
email
Comments
data can be provided on request