Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

comparison of concentric and eccentric progressive resistive exercises on pain and disability in posterior tibial tendon dysfunction

Protocol summary

Study aim
To compare the effects in concentric and eccentric progressive resistive exercises on pain and disability in posterior tibial tendon dysfunction.

Design
A concealed, randomized, single blinded, clinical trial with a parallel group design of 30 patients. Lottery method will be used for Randomization.

Settings and conduct
Haq Orthopedic Hospital, Rabia Welfare hospital, Kanaan Physiotherapy and Spine Clinic

Participants/Inclusion and exclusion criteria
Inclusion criteria: • Age: 40–60 years • Current complaint of foot and ankle pain that has lasted for three months or more • Flexible pes planovalgus deformity in the clinical assessment • Pes planovalgus foot deformity with longitudinal arch flattening verified by radiograph Exclusion criteria: • Rigid foot deformity • Acute infection or alcohol addiction limiting participation in study protocol Acute use of local or systemic analgesics • Acute overuse or traumatic injury to the lower leg (excluding pes planovalgus associated pathology) • Prior surgery to the lower limb

Intervention groups
Group 1 will receive stretching exercises and foot orthosis and concentric progressive resistive exercises (CPR Group) including plantar flexion and eversion of ankle joint. Group 2 will receive stretching exercises and foot orthosis eccentric progressive exercises (OE Group) including dorsiflexion and inversion of ankle joint.

Main outcome variables
Pain and Disability: Pain will be measured through Numeric Pain Rating Scale (NPRS) and disability will be measured through Pain disability index (PDI) scale.

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20190715044216N6**
Registration date: **2022-02-10, 1400/11/21**
Registration timing: **registered_while_recruiting**

Last update: **2022-02-10, 1400/11/21**
Update count: **0**

Registration date
2022-02-10, 1400/11/21

Registrant information

Name
Naveed Anwar

Name of organization / entity
Riphah International University

Country
Pakistan

Phone
+92 42 35126110

Email address
naveedanwar982@yahoo.com

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2022-01-01, 1400/10/11

Expected recruitment end date
2022-06-30, 1401/04/09

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
comparison of concentric and eccentric progressive resistive exercises on pain and disability in posterior tibial tendon dysfunction

Public title
comparison of concentric and eccentric progressive resistive exercises on pain and disability in posterior tibial tendon dysfunction
Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria:
Age: 40–60 years • Current complaint of foot and ankle pain that has lasted for three months or more Flexible pes planovalgus deformity in the clinical assessment Pes planovalgus foot deformity with longitudinal arch flattening verified by radiograph
Exclusion criteria:
Rigid foot deformity Acute infection or alcohol addiction limiting participation in study protocol Acute use of local or systemic analgesics Acute overuse or traumatic injury to the lower leg (excluding pes planovalgus associated pathology) Prior surgery to the lower limb
Age
From **40 years** old to **60 years** old
Gender
Both

Phase
3
Groups that have been masked

- Participant

Sample size
Target sample size: **30**
Randomization (investigator's opinion)
Randomized
Randomization description
Taking into account the above mentioned inclusion and exclusion criteria, patients will be recruited in the study through convenient sampling technique and then will be randomly assigned to each group according to consort guideline 2010. Written informed consent will be taken. After enrollment into study, patient will be allocated either to Group 1 and Group 2 by lottery method. No. of Chits will be equal to total sample size. Each patients will be requested to draw a chit from the box and after that patient will be recruited into either Group 1 and Group 2
Blinding (investigator's opinion)
Single blinded
Blinding description
1. It will be a single blinded study 2. Participants of both groups will be kept unfamiliar to the treatment protocol by lottery method. 3. Participants of both groups will be called for treatment on alternate days in a week. 4. The health care provider (physical therapist) will be aware to the whole treatment procedure that will be provided to the participants.
Placebo
Not used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Riphah international research and ethics committe
Street address
28M Quid e azam industrial estate kot lakhpat lahore
City
Lahore
Postal code
57400
Approval date
2021-06-07, 1400/03/17
Ethics committee reference number
REC/RCR & AHS/21/0106

Health conditions studied

1

Description of health condition studied
Posterior Tibial Tendon Dysfunction
ICD-10 code
M76.82
ICD-10 code description
Posterior tibial tendinitis

Primary outcomes

1

Description
Pain
Timepoint
Intervention treatment will be given to subjects 2 sessions per week and 2 sets per day, 1 set in clinical setup and 2nd for home plan. Total intervention period will be of 6 weeks.
Method of measurement
Pain Disability Index (PDI)

2

Description
Disability
Timepoint
Intervention treatment will be given to subjects 2 sessions per week and 2 sets per day, 1 set in clinical setup and 2nd for home plan. Total intervention period will be of 6 weeks.
Method of measurement
Numeric Pain Rating Scale (NPRS)

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group 1:will perform posterior tibialis exercise with ankle in planter flexion and eversion in supine lying position +heating packs for 20 minutes and A Thera-band will be place under the Ankle and advice the patient to extend their ankle by pushing the downward of ankle into thera-band while keep your ankle in planter flexion during exercise.The hold time for isometric contraction will be 10 sec follow by a rest period of 5 sec in between the contractions. Each patient will be complete 2 sessions in a day , in each session consist of 1 set of 10 repetitions of planter flexion perform once at the hospital and once at home for the 2 days/6-week time for testing up:

Category
Rehabilitation

2

Description
Intervention group 2:will perform posterior tibialis exercise with ankle in dorsiflexion and inversion in supine lying position + heating packs for 20 minutes and A Thera-band will be place above the Ankle and advice the patient to flex their ankle by pushing the upward of ankle into thera-band while keep your ankle in dorsiflexion during exercise.The hold time for isometric contraction will be 10 sec follow by a rest period of 5 sec in between the contractions. Each patient will be complete 2 sessions in a day , in each session consist of 1 set of 10 repetitions of planter flexion perform once at the hospital and once at home for the 2 days/6-week time for testing up:

Category
Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center
Rabia Welfare Hospital

Full name of responsible person
Mr. Jameel

Street address
house # 9, street # 21, Mohala Neewa chah mira lahore

City
Lahore

Postal code
54900

Phone
+92 348 4266429

Email
drabduljabbar743725@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Riphah International University

Full name of responsible person
Muhammad Jabbar

Street address
house # 9, street # 21, Mohala Neewa chah mira lahore

City
Lahore

Postal code
54900

Phone
+92 348 4266429

Email
drabduljabbar743725@gmail.com

Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?
Yes

Title of funding source
Riphah International University

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
Riphah International University

Full name of responsible person
Muhammad Jabbar

Position
Student

Latest degree
Master

Other areas of specialty/work
Physiotherapy

Street address
house # 9, street # 21, Mohala Neewa chah mira lahore

City
Lahore

Province
punjab

Postal code
54900

Phone

+92 348 4266429

Email

drabduljabbar743725@gmail.com

Person responsible for scientific inquiries

Contact

Name of organization / entity

Riphah International University

Full name of responsible person

Muhammad Jabbar

Position

Student

Latest degree

Master

Other areas of specialty/work

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Person responsible for updating data

Contact

Name of organization / entity

Riphah International University

Full name of responsible person

Muhammad Jabbar

Position

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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

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

comparison of concentric and eccentric progressive resistive exercises on pain and disability in posterior tibial tendon dysfunction

When the data will become available and for how long

30-6-2022

To whom data/document is available

people working in academic situation

Under which criteria data/document could be used

Author will review the request

From where data/document is obtainable

drabduljabbar743725@gmail.com

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

request will be entertained through email after which people working in academic institutions will be granted request

Comments