

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

29 Jun 2026

### THE STUDY COMPARING THE EFFECTIVENESS OF EXERCISES ALONG WITH MAITLAND NAVICULAR MOBILIZATION VERSUS EXERCISES ALONE IN PATIENTS WITH PES PLANUS: A RANDOMIZED CONTROL TRAIL

#### Protocol summary

##### Study aim

The purpose of this study was to find the comparative impact of exercises with navicular mobilization versus exercise alone in patients with flat foot. In flat foot, hence the foot is pronated so the mobilization has to be given in order to improve normal biomechanics of foot or to elevate the medial arch. There is paucity of literature on mid foot mobilization in patients having flat foot. So, a comparative effect of these treatments on the navicular height and foot posture index in patients with flat foot was done to find out which one was superior to the other.

##### Design

Two arm parallel group randomised trial

##### Settings and conduct

Rehman Medical Institute, Peshawar However, assessor, who will assess pre and post measurements, will be blinded.

##### Participants/Inclusion and exclusion criteria

Inclusion Criteria: 1. Subjects aged between 18 to 30 years 2. Both males and females 3. Unilateral or bilateral involvement 4. Subjects having flexible flat feet with navicular drop test positive Exclusion Criteria: 1. History of fractures in the lower limb 2. Skin infections and wounds on the foot 4. Any neurological deficit 5. Peripheral vascular diseases.

##### Intervention groups

Control Group (Group A): Resistive exercises using TheraBand of 12 repetitions and 3 sets. Resistive exercises will contain plantarflexion, inversion, flexion of big toe and abduction of big toe Experimental Group (Group B): Group B will be given talonavicular mobilization along with exercises. In talonavicular mobilization, a dorsal glide of 3 sets and 20 repetitions will be given to the navicular while stabilizing the talar neck. Resistive exercises using TheraBand will be given with 12 repetitions of 3 sets.

##### Main outcome variables

Outcome measures will be used on baseline, 1st assessment (after 3 weeks) and 2nd assessment (after 6 weeks) using Foot Posture Index (FPI) and navicular drop test

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20220523054969N1**

Registration date: **2022-05-24, 1401/03/03**

Registration timing: **prospective**

Last update: **2022-05-24, 1401/03/03**

Update count: **0**

##### Registration date

2022-05-24, 1401/03/03

##### Registrant information

##### Name

Aqsa Wisal

##### Name of organization / entity

Rehman medical institute, Peshawar

##### Country

Pakistan

##### Phone

+92 91 5838000

##### Email address

aqsa.wisal@rmi.edu.pk

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2022-06-23, 1401/04/02

##### Expected recruitment end date

2022-09-23, 1401/07/01

**Actual recruitment start date**

empty

**Actual recruitment end date**

empty

**Trial completion date**

empty

**Scientific title**

THE STUDY COMPARING THE EFFECTIVENESS OF EXERCISES ALONG WITH MAITLAND NAVICULAR MOBILIZATION VERSUS EXERCISES ALONE IN PATIENTS WITH PES PLANUS: A RANDOMIZED CONTROL TRAIL

**Public title**

THE STUDY COMPARING THE EFFECTIVENESS OF EXERCISES ALONG WITH MAITLAND NAVICULAR MOBILIZATION VERSUS EXERCISES ALONE IN PATIENTS WITH PES PLANUS: A RANDOMIZED CONTROL TRAIL

**Purpose**

Treatment

**Inclusion/Exclusion criteria****Inclusion criteria:**

Subjects aged between 18 to 30 years Both males and females Unilateral or bilateral involvement Subjects having flexible flat feet with navicular drop test positive.

**Exclusion criteria:**

History of fractures in the lower limb Skin infections and wounds on the foot Any neurological deficit Peripheral vascular diseases.

**Age**

From **18 years** old to **30 years** old

**Gender**

Both

**Phase**

3

**Groups that have been masked**

- Outcome assessor

**Sample size**

Target sample size: **32**

**Randomization (investigator's opinion)**

Randomized

**Randomization description**

Sealed envelopes After participants are selected, they will be randomly allocated to control group and experimental group using lottery method in which they will be asked to select a piece of paper from a box. The piece of paper will be marked with initial of the groups (such as A or B) and then the participants will be allocated to the group initial that was on paper.

**Blinding (investigator's opinion)**

Single blinded

**Blinding description**

Due to nature of study, it will not be feasible to blind researcher/therapist and subjects. However, assessor, who will assess pre and post measurements, will be blinded.

**Placebo**

Not used

**Assignment**

Parallel

**Other design features****Secondary Ids**

empty

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

AS&RB

**Street address**

F1 Phase-6 Rd, Phase 5 Hayatabad

**City**

PESHAWAR

**Postal code**

25100

**Approval date**

2022-05-24, 1401/03/03

**Ethics committee reference number**

Not issued yet

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

Flat Foot

**ICD-10 code****ICD-10 code description****Primary outcomes****1****Description**

Navicular Height

**Timepoint**

Outcome measures will be used on baseline, 1st assessment (after 3 weeks) and 2nd assessment (after 6 weeks)

**Method of measurement**

Navicular drop test

**Secondary outcomes****1****Description**

Flat Foot

**Timepoint**

Outcome measures will be used on baseline, 1st assessment (after 3 weeks) and 2nd assessment (after 6 weeks)

**Method of measurement**

Foot posture index

**Intervention groups**

## 1

### Description

Intervention group: talonavicular mobilization along with exercises. In talonavicular mobilization, a dorsal glide of 3 sets and 20 repetitions will be given to the navicular while stabilizing the talar neck. Resistive exercises using TheraBand will be given with 12 repetitions of 3 sets. Resistive exercises will contain plantarflexion, inversion, flexion of big toe and abduction of big toe.

### Category

Rehabilitation

## 2

### Description

Control group: Resistive exercises using TheraBand of 12 repetitions and 3 sets. Resistive exercises will contain plantarflexion, inversion, flexion of big toe and abduction of big toe will be given

### Category

Rehabilitation

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

Rehman Medical Institute, Peshawar

##### Full name of responsible person

Aqsa Wisal

##### Street address

5/B-2 Phase 5

##### City

PESHAWAR

##### Postal code

25000

##### Phone

+92 91 5838000

##### Email

aqsa.wisal@rmi.edu.pk

## Sponsors / Funding sources

### 1

#### Sponsor

##### Name of organization / entity

Khyber Medical Institute, Peshawar

##### Full name of responsible person

Rida Shabbir

##### Street address

F1 Phase-6 Rd, Phase 5 Hayatabad

##### City

Peshawar

##### Postal code

25000

##### Phone

+92 91 5892885

##### Email

ipmr@kmu.edu.pk

#### Grant name

#### Grant code / Reference number

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

Yes

#### Title of funding source

Khyber Medical Institute, Peshawar

#### Proportion provided by this source

100

#### Public or private sector

Public

#### 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

Khyber Medical University, Peshawar

##### Full name of responsible person

RIDA SHABBIR

##### Position

Lecturer

##### Latest degree

Master

##### Other areas of specialty/work

Physiotherapy

##### Street address

F1 Phase-6 Rd, Phase 5 Hayatabad

##### City

PESHAWAR

##### Province

Khyber Pakhtunkhwa

##### Postal code

25100

##### Phone

+92 91 5813016

##### Email

rida.kmu.06@gmail.com

## Person responsible for scientific inquiries

#### Contact

##### Name of organization / entity

Rehman Medical Institute, Peshawar

##### Full name of responsible person

Bilal Khan

##### Position

Clinical Incharge

##### Latest degree

Master

##### Other areas of specialty/work

Physiotherapy

##### Street address

5-B/2 Shaukat Khanum Rd, Phase 5 Hayatabad

##### City

PESHAWAR  
**Province**  
Khyber Pakhtunkhwa  
**Postal code**  
25000  
**Phone**  
+92 91 5838666  
**Fax**  
**Email**  
bilal.khan@rmi.edu.pk

## Person responsible for updating data

### Contact

**Name of organization / entity**  
Rehman Medical Institute, Peshawar  
**Full name of responsible person**  
Muhammad Zulfiqar Ali  
**Position**  
Clinical Physiotherapist  
**Latest degree**  
Master  
**Other areas of specialty/work**  
Physiotherapy  
**Street address**  
5-B/2 Shaukat Khanum Rd, Phase 5 Hayatabad,  
Peshawar, Khyber Pakhtunkhwa  
**City**

peshawar  
**Province**  
Khyber Pakhtunkhwa  
**Postal code**  
25000  
**Phone**  
+92 91 5838000  
**Email**  
muhammad.zulfiqar@rmi.edu.pk

## Sharing plan

### Deidentified Individual Participant Data Set (IPD)

No - There is not a plan to make this available

### Justification/reason for indecision/not sharing IPD

There is no further information

### Study Protocol

No - There is not a plan to make this available

### Statistical Analysis Plan

No - There is not a plan to make this available

### Informed Consent Form

No - There is not a plan to make this available

### Clinical Study Report

No - There is not a plan to make this available

### Analytic Code

No - There is not a plan to make this available

### Data Dictionary

No - There is not a plan to make this available