

Clinical Trial Protocol

Iranian Registry of Clinical Trials

11 Sep 2026

COMPARATIVE EFFECTS OF GRASTON TECHNIQUE AND MUSCLE ENERGY TECHNIQUE ON PAIN AND TEMPOROSPATIAL GAIT PARAMETERS IN PATIENTS WITH PLANTAR FASCIITIS

Protocol summary

Study aim

To find out comparative benefits of Graston Technique and MET on the pain, foot and ankle impairment and temporospatial gait parameters i.e. cadence, gait speed, stride length, step width, stride time) in individuals with plantar fasciitis

Design

randomized clinical trial

Settings and conduct

Faisal hospital, Faisalabad □ Allied hospital, Faisalabad

Participants/Inclusion and exclusion criteria

48 participants

Intervention groups

Group: A (n = 24) Ultrasound therapy, Graston technique and stretching exercises Group: B (n = 24) Ultrasound therapy, Muscle Energy Technique and stretching exercises

Main outcome variables

Pain Foot and ankle disability Temporospatial gait parameter Cadence Step width Stride length Stride time Gait speed

General information

Reason for update

Acronym

Plantar Fasciitis, Graston Technique, Muscle Energy Technique

IRCT registration information

IRCT registration number: **IRCT20230716058795N3**

Registration date: **2024-07-25, 1403/05/04**

Registration timing: **retrospective**

Last update: **2024-07-25, 1403/05/04**

Update count: **0**

Registration date

2024-07-25, 1403/05/04

Registrant information

Name

Moater Iftikhar

Name of organization / entity

The university of Faisalabad

Country

Pakistan

Phone

+92 301 6085203

Email address

moaterhassankazmi@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2024-05-06, 1403/02/17

Expected recruitment end date

2024-08-07, 1403/05/17

Actual recruitment start date

2023-12-08, 1402/09/17

Actual recruitment end date

2024-05-06, 1403/02/17

Trial completion date

2024-05-27, 1403/03/07

Scientific title

COMPARATIVE EFFECTS OF GRASTON TECHNIQUE AND MUSCLE ENERGY TECHNIQUE ON PAIN AND TEMPOROSPATIAL GAIT PARAMETERS IN PATIENTS WITH PLANTAR FASCIITIS

Public title

COMPARATIVE EFFECTS OF GRASTON TECHNIQUE AND MUSCLE ENERGY TECHNIQUE ON PAIN AND TEMPOROSPATIAL GAIT PARAMETERS IN PATIENTS WITH PLANTAR FASCIITIS

Purpose

Health service research

Inclusion/Exclusion criteria

Inclusion criteria:
Age 30-50 years. Both genders Patients with unilateral or bilateral plantar fasciitis Pain in the heel for more than 3 month (chronic pain) History of heel pain after prolonged period of non-weight-bearing activity or first steps in the morning. On palpation at the medial tubercle of the heel, complain of pain and tenderness Pain that gets worse when walking or standing for a long time. Visual analogue scale at least 5 points for pain during the first few steps of walking in the morning. Positive windlass test. Signed informed consent.

Exclusion criteria:
Refusal to consent form ☐ Recent accidental foot or ankle injury, previous lower-body surgical intervention within 6 months ☐ Recent fractures in the lower limb (femur, tibia, fibula or foot bones) within 6 months ☐ A leg length discrepancy of the 1 centimeters or greater ☐ Diagnosed musculoskeletal disorders (rheumatoid arthritis, patellofemoral syndrome, calcaneal spurs) ☐ Diagnosed neuropathy, local and systemic neurologic disorders (including sciatica, tarsal tunnel syndrome, nerve entrapment of abductor digiti minimi and posterior tibial) ☐ Diagnosed posterior calcaneal spur, calcaneal stress fracture ☐ Pregnancy ☐ Received local steroid injection

Age
From **30 years** old to **50 years** old
Gender
Both

Phase
1-2
Groups that have been masked
No information

Sample size
Target sample size: **48**
Actual sample size reached: **48**
Randomization (investigator's opinion)
Randomized

Randomization description
Method of randomization is Randomized Clinical Trial.
The patients are grouped into two groups. one intervention and other control

Blinding (investigator's opinion)
Not blinded

Blinding description
Placebo
Not used

Assignment
Crossover
Other design features
randomized clinical trial

Secondary Ids
empty

Ethics committees

1
Ethics committee
Name of ethics committee

the university of Faisalabad
Street address
Sargodha road
City
Faisalabad
Postal code
38000
Approval date
2024-05-06, 1403/02/17
Ethics committee reference number
TUF/Addl Reg/SB/386

Health conditions studied

1
Description of health condition studied
plantar Fasciatis
ICD-10 code
0J8R 0J8Q
ICD-10 code description
0J8R 0J8Q

Primary outcomes

1
Description
pain
Timepoint
before and after the 4 weeks of treatment period
Method of measurement
Visual Analogue Scale (VAS)

2
Description
Foot and ankle disability
Timepoint
before and after the 4 weeks of treatment period
Method of measurement
Foot Function Index (FFI)

3
Description
gait parameters
Timepoint
before and after the 4 weeks of treatment period
Method of measurement
walking speed was measured by 4-meter walking test, and step and stride length was evaluated by measuring tape by taking foot prints

Secondary outcomes
empty
Intervention groups

1

Description

Intervention group: received ultrasound then Graston technique and stretching exercises

Category

Treatment - Other

2

Description

Intervention group: received ultrasound, Muscle Energy Technique with stretching exercises

Category

Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center

faisal hospital

Full name of responsible person

nabeel zahid

Street address

canal road

City

faisalabad

Postal code

38000

Phone

+92 333 6985203

Email

nabeelzahid@gmail.com

2

Recruitment center

Name of recruitment center

Allied hospital

Full name of responsible person

maria hafeez

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Email

mariahafeez@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

The university off faisalabad

Full name of responsible person

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Grant name

Grant code / Reference number

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

No

Title of funding source

MS thesis

Proportion provided by this source

10

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 FAISALABAD

Full name of responsible person

Moater Iftikhar

Position

LECTURER

Latest degree

Master

Other areas of specialty/work

Rehabilitation management

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Person responsible for scientific inquiries

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Name of organization / entity

THE UNIVERSITY OF FAISALABAD

Full name of responsible person

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Position

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Latest degree

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Other areas of specialty/work

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Person responsible for updating data

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Name of organization / entity

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Position

PUNJAB

Latest degree

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Other areas of specialty/work

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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

patient will

Study Protocol

Undecided - It is not yet known if there will be a plan to make this available

Statistical Analysis Plan

Undecided - It is not yet known if there will be a plan to make this available

Informed Consent Form

Undecided - It is not yet known if there will be a plan to make this available

Clinical Study Report

Undecided - It is not yet known if there will be 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

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When the data will become available and for how long

as soon as possible

To whom data/document is available

Readers

Under which criteria data/document could be used

specifications still not set

From where data/document is obtainable

Faisal Hospital Allied Hospital

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

multiple

Comments