Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

COMPARATIVE EFFECTS OF GRASTON TECHNIQUE AND MUSCLE ENERGY TECHNIQUE ON PAIN AND TEMPOROSAPTIAL 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 Temporosaptial 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

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Pakistan

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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 TEMPOROSAPTIAL GAIT PARAMETERS IN PATIENTS WITH PLANTAR FASCIITIS

Public title
COMPARATIVE EFFECTS OF GRASTON TECHNIQUE AND MUSCLE ENERGY TECHNIQUE ON PAIN AND TEMPOROSAPTIAL 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: receiveved 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
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2

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Sponsors / Funding sources

1

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

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