Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Comparative Effects Of Active Release Technique And Positional Release Therapy In Female Students With Tightened Calf Muscles.

Protocol summary

Study aim
To evaluate the effects of the Active Release Technique and Positional Release Technique in female students with tightened calf muscles.

Design
Randomized controlled trial design .

Settings and conduct
The University of Faisalabad Government College University Faisalabad.

Participants/Inclusion and exclusion criteria
Inclusion criteria • Age 20-30 years • Reduced ROM (ankle dorsiflexion) • Height of heel: 2” and above • Through flat palpation, one hypersensitive sore nodule within a perceptible tense band in the leg muscle Exclusion criteria • Lower limb musculoskeletal injury or surgery • Acute Cardio-Respiratory or Neurological disease • Medical or surgical complications • Fibromyalgia syndrome • Congenital deformity of the foot and ankle • Lower limb fracture • Diabetic neuropathy • Peripheral vascular disease

Intervention groups
Subjects were divided into two groups by convenient sampling technique using the lottery method. Pre-treatment readings were taken from each subject for pain using NPRS, ROM (dorsiflexion and plantarflexion), and respectively. Treatment was given for a total of four weeks. 3 times each week for both groups. Ultrasound was used as the baseline treatment for both groups. Both groups received conventional Physiotherapy treatment which included stretching of both gastrocnemius and soleus muscles. Treatment Group A performed Active Release Therapy and Group B performed Positional Release Therapy

Main outcome variables
Primary Outcome Measure: • Numerical pain rating scale Secondary Outcome Measure • Cadence • Dorsiflexion • Plantarflexion

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20230418057955N1**
Registration date: **2023-08-06, 1402/05/15**
Registration timing: **retrospective**

Last update: **2023-08-06, 1402/05/15**
Update count: **0**

Registration date
2023-08-06, 1402/05/15

Registrant information

Name
Sibgah Maqsood

Name of organization / entity
The University of Faisalabad

Country
Pakistan

Phone
+92 41 8750971

Email address
2021-ms-pt-055@tuf.edu.pk

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2023-03-28, 1402/01/08

Expected recruitment end date
2023-06-15, 1402/03/25

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
Comparative Effects Of Active Release Technique And Positional Release Therapy In Female Students With Tightened Calf Muscles.

Public title
Active Release Technique And Positional Release Therapy For Tightened Calf Muscles.

Purpose
Treatment

Inclusion/Exclusion criteria

Inclusion criteria:
Subjects wearing high heels and willing to participate Age 20-30 years Reduced ROM (ankle dorsiflexion) NPRS showing more than 3 Heels wearing duration: minimum 1 year Wearing heels at least 5 times every week for 5 hours per day Height of heel: 2” and above Through flat palpation, one hypersensitive sore nodule within a perceptible tense band in the leg muscle

Exclusion criteria:
Lower limb musculoskeletal injury or surgery Acute Cardio-Respiratory or Neurological disease Medical or surgical complications Fibromyalgia syndrome Congenital deformity of the foot and ankle Lower limb fracture Diabetic neuropathy Peripheral vascular disease

Age
From **20 years** old to **30 years** old

Gender
Female

Phase
N/A

Groups that have been masked

- Participant

Sample size
Target sample size: **26**

Randomization (investigator's opinion)
Randomized

Randomization description
Simple random method was used. Individual randomization was assigned. Table of random number of participants were generated. Sealed envelopes were used in randomization. The random sequence is typically built using algorithms that generate random numbers.

Blinding (investigator's opinion)
Single blinded

Blinding description
Participants are unaware of their assigned groups (treatment/control) due to identical presentation of interventions. In investigator-initiated trials, the PI is not involved in treatment allocation discussions with participants. Care providers are blinded to participants' treatments, ensuring unbiased care delivery. Those collecting data are uninformed about treatment allocation, maintaining objective data gathering. Data Safety and Monitoring Board's access to treatment information is limited, focusing on safety. Writers use anonymized data, avoiding bias in result interpretation.

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
institutional review committee board of ethics The university of Faisalabad

Street address
Sheikhupura Road Faisalabad

City
Faisalabad

Postal code
38000

Approval date
2023-02-03, 1401/11/14

Ethics committee reference number
TUF/Addl Reg/SB/352

Health conditions studied

1

Description of health condition studied
Tightness Of Calf Muscles

ICD-10 code
M62.838

ICD-10 code description
Other muscle spasm

Primary outcomes

1

Description
Pain

Timepoint
before intervention, 2nd week and 4th week after intervention

Method of measurement
Numerical Pain Rating Scale

Secondary outcomes

1

Description
Ankle Range of Motion

Timepoint
before intervention, 2nd week and 4th week after intervention

Method of measurement
goniometer

2

Description
Cadence
Timepoint
before intervention, 2nd week and 4th week after intervention
Method of measurement
stop watch

Intervention groups

1

Description
Intervention Group 1: The group comprised of participants who received the experimental intervention under investigation. The intervention is designed to briefly describe the nature and purpose of the intervention. Participants in this group will be exposed to details of the intervention, such as treatment, therapy, medication, or any specific procedures. The objective of this intervention is explained the intended outcomes or goals.
Category
Treatment - Other

2

Description
Intervention group 2: The group comprised of participants who received the experimental intervention under investigation. The intervention is designed to briefly describe the nature and purpose of the intervention. Participants in this group will be exposed to details of the intervention, such as treatment, therapy, medication, or any specific procedures. The objective of this intervention is explained the intended outcomes or goals.
Category
Treatment - Other

Recruitment centers

1

Recruitment center
Name of recruitment center
The University Of Faisalabad
Full name of responsible person
Dr. Mariam Mehmood
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Sponsors / Funding sources

1

Sponsor
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Sibgahmaqsood547@gmail.com
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
The University of Faisalabad
Proportion provided by this source
100
Public or private sector
Private
Domestic or foreign origin
Foreign
Category of foreign source of funding
Sponsor: country of origin
Country of origin
PK
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
Dr. Mariam Mehmood
Position
Clinical Coordinator
Latest degree
Master
Other areas of specialty/work
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Person responsible for updating data

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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
Not applicable
Analytic Code
Not applicable
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
IPD collected for the primary and secondary outcome both measure
When the data will become available and for how long
starting in January 2025
To whom data/document is available
Academicians
Under which criteria data/document could be used
For Research purpose only
From where data/document is obtainable
sibgahmaqsood547@gmail.com
What processes are involved for a request to access data/document
if any researcher share their ethical approval letter and summary of the ongoing research.
Comments