Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Comparative effects of Post Isometric Relaxation and Strain Counterstrain Technique on Pain, Range of Motion and Functional Activities among individuals with Gastrocnemius Tightness

Protocol summary

Study aim
To Compare the effects of post isometric relaxation and strain-counterstrain technique on pain, Range of motion and functional activities among individuals with gastrocnemius tightness.

Design
Single blinded randomized clinical trial with parallel assignment of 44 participants to two groups equally.

Settings and conduct
The study will be conducted at Arif Memorial Teaching Hospital. Outcome assessor will be kept blind.

Participants/Inclusion and exclusion criteria
Inclusion Criteria: Participants from age group of 18-40 who present with gastrocnemius tightness. Patients with positive silfverskiold test. Exclusion Criteria: Systemic disease causing musculoskeletal issue. Any other type of connection tissue disorder. With history of neurological disorder. Having recent lower limb or spine fracture causing change in gait pattern.

Intervention groups
Group A: Participants of group A received exercise post isometric relaxation exercise, 3 times a week for 4 weeks. Group B: Participants of group B received strain-counterstain technique, 3 times a week for 4 weeks.

Main outcome variables
Pain: The intensity of pain will be measured by the numeric pain rating scale [NPRS]. Range of motion: ROM will be measured using a Universal Goniometer. Functional activities: Functional activities will be examined by foot functional index.

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20220701055331N4**
Registration date: **2024-06-15, 1403/03/26**
Registration timing: **prospective**

Last update: **2024-06-15, 1403/03/26**
Update count: **0**

Registration date
2024-06-15, 1403/03/26

Registrant information

Name
Ifra Zulqarnain Awan
Name of organization / entity
Rashid Latif Medical College
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Pakistan
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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2024-06-20, 1403/03/31

Expected recruitment end date
2024-11-20, 1403/08/30

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
Comparative effects of Post Isometric Relaxation and Strain Counterstrain Technique on Pain, Range of Motion and Functional Activities among individuals with

Gastrocnemius Tightness

Public title
Comparative effects of Post Isometric Relaxation and Strain Counterstrain Technique on Pain, Range of Motion and Functional Activities among individuals with Gastrocnemius Tightness

Purpose
Treatment

Inclusion/Exclusion criteria

Inclusion criteria:
Both male and female Participants between age of 18-40 years with gastrocnemius tightness Patients with positive silfverskiold test

Exclusion criteria:
Patients with Any Systemic disease Patients with any other type of connection tissue disorder Patients With history of neurological disorder Patients Having recent lower limb or spine fracture causing change in gait pattern

Age
From **18 years** old to **40 years** old

Gender
Both

Phase
N/A

Groups that have been masked

- Outcome assessor

Sample size
Target sample size: **44**

Randomization (investigator's opinion)
Randomized

Randomization description
Randomization will be done with random computer number generator. Assign unique identification numbers to participants, then use a reliable software tool to generate a list of random numbers. Match these numbers to participant IDs and allocate individuals to different study groups based on the sorted random numbers. Ensure that the randomization process is concealed and documented for transparency and integrity.

Blinding (investigator's opinion)
Single blinded

Blinding description
It will be a Single blinded study. outcome assessor will be blind to the intervention received by the participants. To achieve single blinding, the outcome assessor is not informed about the treatment allocation of the participants and remains unaware of which group received the intervention being studied.

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Institutional Review Board of Rashid Latif Medical College, Lahore.

Street address
35-KM Ferozepur Road Lahore

City
Lahore

Postal code
54600

Approval date
2023-12-25, 1402/10/04

Ethics committee reference number
IRB/2023/136

Health conditions studied

1

Description of health condition studied
Gastrocnemius tightness

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description
Pain

Timepoint
Before intervention and 4 weeks after intervention

Method of measurement
Numeric pain rating scale

2

Description
Range of motion

Timepoint
Before intervention and 4 weeks after intervention

Method of measurement
Universal goniometer

3

Description
Functional activities

Timepoint
Before intervention and 4 weeks after intervention

Method of measurement
Foot functional index

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group A: post isometric relaxation: Participants of group A received post isometric relaxation exercise, 3 times a week for 4 weeks.
Category
Rehabilitation

2

Description
Intervention group B: strain-counterstain technique: Participants of group B received strain-counterstain technique, 3 times a week for 4 weeks.
Category
Rehabilitation

Recruitment centers

1

Recruitment center
Name of recruitment center
Arif Memorial Teaching Hospital
Full name of responsible person
Dr. Ifra Zulqarnain Awan
Street address
35-km ferozepur road Lahore
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Sponsors / Funding sources

1

Sponsor
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Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Rashid Latif Medical College
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
Rashid Latif Medical College
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Aimen Tahir
Position
Physiotherapist
Latest degree
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Other areas of specialty/work
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Sharing plan

Deidentified Individual Participant Data Set (IPD)

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

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

No - There is not a plan to make this available

Data Dictionary

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