Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Effects of post isometric relaxation technique on pain, range of motion and quality of life in patients with gastrocnemius trigger points

Protocol summary

Study aim
To compare the effects of Post Isometric Relaxation Technique on Pain, Range of Motion and Quality Of Life in Patients with Gastrocnemius Trigger Points

Design
Randomized Controlled Trial; single-blinded; on 40 samples; parallel groups; randomized by computer-generated method and further concealed envelop method used for allocation in the group. In the envelope, 1 will be code for the control group and 2 will be code for the experimental group.

Settings and conduct
The study will be conducted at the Department of Physical Therapy DHQ Hospital Layyah. The study will be single-blinded. The assessor will unaware of the treatment given to either group.

Participants/Inclusion and exclusion criteria
Inclusion Criteria: Age is between 25-55 years. Both gender 49 Long standing workers (at least 3-5 hours of standing work including 5- min seated rest breaks and a 30-min lunch break) Pre-diagnosed patients of calf pain NPRS scoring ≤ 4 The presence of at least one trigger point in unilateral gastrocnemius muscles. Jump sign positive. Exclusion Criteria: Analgesic intake in the past 48 hours Individuals who are already involved in any exercise program for lower extremity Had a previous history of lateral malleolar, bi malleolar or calcaneal fracture that would affect their gait pattern or strength of the gastrocnemius Current pregnancy

Intervention groups
Experimental Physical Therapy Group (B): Group B will be given Post isometric Relaxation along with routine physical therapy including hot packs, range of motion exercises, static stretching, and strengthening exercises of the gastrocnemius muscle. This will be given up to three sessions per week. Post Isometric Relaxation, Static Stretching, and strengthening exercises will be provided in three repetitions per session. Each treatment session will have 40-45 minutes duration.

Main outcome variables
pain, range of motion, and Quality of Life

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20210321050752N2**
Registration date: **2023-03-06, 1401/12/15**
Registration timing: **registered_while_recruiting**

Last update: **2023-03-06, 1401/12/15**
Update count: **0**

Registration date
2023-03-06, 1401/12/15

Registrant information

Name
Muhammad Waqas

Name of organization / entity
The University of Lahore

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Pakistan

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+92 42 36532841

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drwaqasfayyaz@gmail.com

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2022-12-07, 1401/09/16

Expected recruitment end date
2023-05-07, 1402/02/17

Actual recruitment start date
empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effects of post isometric relaxation technique on pain, range of motion and quality of life in patients with gastrocnemius trigger points

Public title

Effects of post isometric relaxation technique in patients with gastrocnemius trigger points

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Age is between 25-55 years Both gender Long standing workers (at least 3-5 hours of standing work including 5-min seated rest breaks and a 30-min lunch break) Pre diagnosed patients of calf pain Numeric pain rating scale (NPRS) scoring ≤ 4 The presence of at least one trigger point in unilateral gastrocnemius muscles. Jump sign positive. (While compressing the Myofascial Trigger Point, carefully examined the subject's reaction. A positive jump sign was defined as the subject withdrawing from palpation, wincing, or producingany pain related vocalization)

Exclusion criteria:

Analgesic intake in past 48 hours Individuals who are already involved in any exercise program for lower extremity Had a previous history of lateral malleolar, bi malleolar or calcaneal fracture that would affect their gait pattern or strength of the gastrocnemius Current pregnancy

Age

From **22 years** old to **55 years** old

Gender

Both

Phase

N/A

Groups that have been masked

- Outcome assessor

Sample size

Target sample size: **40**

Randomization (investigator's opinion)

Randomized

Randomization description

Patients were randomized by using the computer-generated method and further concealed envelop method is used for allocation in the group. In the envelop, 1 will be code for the control group and 2 will be code for the experimental group.

Blinding (investigator's opinion)

Single blinded

Blinding description

Assessor will only assess the patient at baseline and after follow-up for treatment outcomes. Assessor safe the data for follow-up and will not share it with any therapist or patient. At any stage, the assessor is unaware of the treatment and control group. The study was single-blinded. The assessor was unaware of the treatment given to either groups 1 or 2.

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

The rules and regulations set by the ethical committee of The University of Lahore wIll be followed.

Street address

RAIWIND ROAD CAMPUS: 1-Km, Raiwind Road, Near Thokar Niaz Big, Lahore

City

Lahore

Postal code

5400

Approval date

2022-12-07, 1401/09/16

Ethics committee reference number

REC-UOL-270-12-2022

Health conditions studied

1

Description of health condition studied

Pain in limb

ICD-10 code

M79.6

ICD-10 code description

Pain in limb, hand, foot, fingers and toes

Primary outcomes

1

Description

Pain

Timepoint

Data will be collected at baseline, 4th week and 8th week (follow-up).

Method of measurement

Numeric pain rating scale to measure pain

2

Description

Quality of Life

Timepoint

Data will be collected at baseline, 4th week and 8th week (follow-up).

Method of measurement
Quality of life is measured by Short Form-12 (SF-12).

3

Description
Range of Motion
Timepoint
Data will be collected at baseline, 4th week and 8th week (follow-up).
Method of measurement
Range of motion is measured by universal goniometer.

Secondary outcomes

empty

Intervention groups

1

Description
Experimental Physical Therapy Group (B):Group B will be given Post isometric Relaxation along with routine physical therapy including hot pack, range of motion exercises, static stretching and strengthening exercises of gastrocnemius muscle .This will be given upto three sessions per week. Post IsometricRelaxation, Static Stretching and strengthening exercises will provided in three repetitions per session. Each treatment session will have 40-45 minutes duration.
Category
Rehabilitation

2

Description
Control group: Routine Physical Therapy Group (A):The routine physical therapy will include hot pack, range of motion exercises, static stretching and strengthening exercises of gastrocnemius muscle .This will be given upto three sessions per week. Hot Pack will be used for 8 minutes in each session. Static Stretching and strengthening exercises will provided into three repetitions per session. Each treatment session will have 30-35 minutes duration.
Category
Rehabilitation

Recruitment centers

1

Recruitment center
Name of recruitment center
DHQ Hospital layyah
Full name of responsible person
Khurram Mehmod
Street address
DHQ layyah college road,layyah punjab
City
Layyah
Postal code
31200
Phone
+92 344 4535304
Email
mehmookhuram8@gmail.com

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Self Supported
Full name of responsible person
Sania Naz
Street address
Major moor chubara road layyah
City
Layyah
Postal code
31200
Phone
+92 304 4407035
Email
sania.naz642@gmail.com
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
No
Title of funding source
Self Supported
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
Other

Person responsible for general inquiries

Contact
Name of organization / entity
The University of Lahore
Full name of responsible person
Muhammad Waqas
Position
Lecturer
Latest degree
Master
Other areas of specialty/work
Physiotherapy
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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
Undecided - It is not yet known if there will be a plan to make this available

Analytic Code
Undecided - It is not yet known if there will be 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
Numeric pain rating scale will be used for the assessment of pain and Quality of life-related data.

When the data will become available and for how long
6 months after publication.

To whom data/document is available
academic and clinical research writers.

Under which criteria data/document could be used
Never without permission.

From where data/document is obtainable
From Muhammad Waqas through mail id. drwaqasfayyaz@gmail.com or through a Researchgate account. https://www.researchgate.net/profile/Muhammad-Waqas-26?ev=hdr_xprf

What processes are involved for a request to access data/document
From Muhammad Waqas through mail id. drwaqasfayyaz@gmail.com or through a Researchgate account. https://www.researchgate.net/profile/Muhammad-Waqas-26?ev=hdr_xprf

Comments