

Clinical Trial Protocol

Iranian Registry of Clinical Trials

30 May 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

Country

Pakistan

Phone

+92 42 36532841

Email address

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 producing any 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

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Phone

+92 344 4535304

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mehmookhulam8@gmail.com

Sponsors / Funding sources**1****Sponsor****Name of organization / entity**

Self Supported

Full name of responsible person

Sania Naz

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Phone

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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

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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St# 76, H#09 Muhala Sirajpura Darogawala Shalamar Town Lahore

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Person responsible for scientific inquiries

Contact

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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

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