

Clinical Trial Protocol

Iranian Registry of Clinical Trials

15 Jul 2026

Effectiveness of Active Release Technique and Myofascial Release technique on pain, range of motion and functional Disability in patients with Piriformis syndrome

Protocol summary

Study aim

The aim of the study will be to determine the effects of Active release technique and myofascial technique on Pain, hip range of motion, functional disability in patients with piriformis syndrome.

Design

Parallel group randomized clinical trial and Randomization will be achieved through computer generated random number table.

Settings and conduct

Zubaida Hospital and Fatima Trust Hospital, patients and outcome assessor will be blinded. It will be assessor and participant who will be blinded about the type of intervention. Treatment will be given by principal /investigator. Patients in each group will also be blinded about type of intervention they will receive

Participants/Inclusion and exclusion criteria

Inclusion Criteria: Age: 20- 40 years, Gender: Both male and female, Deep-seated buttock pain with radiating pain, especially intolerable sitting pain, Tenderness of the piriformis muscle, Positive Fair test Exclusion Criteria: Intermittent vascular claudication, spondylolisthesis, Past history of vertebral fracture, Past history of spinal surgery, Spinal tuberculosis, Rheumatoid Arthritis/Osteoarthritis, Disc pathology and mechanical back pain, Avascular necrosis of femoral head, Fracture of femur and hip joint dislocation

Intervention groups

Intervention group A: They will receive Active release technique and conventional treatment in form of hot pack for 10-15 minutes then piriformis muscle will be stretched for 30 seconds hold comprising of 3 sets. Session duration will be 40-50 minutes, twice a week, 8 sessions over 4 weeks Intervention group B: They will receive Myofascial release technique and conventional treatment in from of hot pack for 10-15 minutes then piriformis muscle will be stretched with 30 seconds hold

comprising of 3 sets. Session duration will be 40-50 minutes twice a week, 8 sessions over 4 weeks

Main outcome variables

Pain, range of motion and functional disability

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20230216057434N4**

Registration date: **2023-03-15, 1401/12/24**

Registration timing: **registered_while_recruiting**

Last update: **2023-03-15, 1401/12/24**

Update count: **0**

Registration date

2023-03-15, 1401/12/24

Registrant information

Name

Zainab Sheraz

Name of organization / entity

Riphah International University, Faisalabad

Country

Pakistan

Phone

+92 301 7070941

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zainab.48@hotmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2023-03-05, 1401/12/14

Expected recruitment end date

2023-05-01, 1402/02/11

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effectiveness of Active Release Technique and Myofascial Release technique on pain, range of motion and functional Disability in patients with Piriformis syndrome

Public title

Effectiveness of two manual therapy technique in piriformis syndrome

Purpose

Treatment

Inclusion/Exclusion criteria**Inclusion criteria:**

Age: 20- 40 years Gender: Both male and female Deep-seated buttock pain with radiating pain, especially intolerable sitting pain. Tenderness of the piriformis muscle. Fair test positive

Exclusion criteria:

Intermittent vascular claudication, spondylolisthesis Past history of vertebral fracture Past history of spinal surgery Spinal tuberculosis Rheumatoid Arthritis/Osteoarthritis. Disc pathology and mechanical back pain. Avascular necrosis of femoral head Fracture of femur and hip joint dislocation

AgeFrom **20 years** old to **40 years** old**Gender**

Both

Phase

N/A

Groups that have been masked

- Participant
- Outcome assessor

Sample sizeTarget sample size: **44****Randomization (investigator's opinion)**

Randomized

Randomization description

Randomization will be done through a computer software "Random allocation". The total sample size will be entered with requirement to be allocated in two groups. An automated randomization list will be achieved with attrition rate included.

Blinding (investigator's opinion)

Double blinded

Blinding description

Blinding will be done on part of outcome assessor who will be an experienced therapist. Patients will be assessed by him at the end of treatment session. He will be blinded about the type of intervention patient will received Patients will also be blinded about the type of intervention they will receive

Placebo

Not used

Assignment

Parallel

Other design features**Secondary Ids**

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

Ethics committee of Riphah International University
Faisalabad

Street address

Riphah International University, Faisalabad

City

Faisalabad

Postal code

38000

Approval date

2023-01-26, 1401/11/06

Ethics committee reference number

RCRAHS/REC/23/04

Health conditions studied**1****Description of health condition studied**

Piriformis Syndrome

ICD-10 code

G57.00

ICD-10 code description

Lesion of sciatic nerve, unspecified lower limb

Primary outcomes**1****Description**

Pain

Timepoint

Assessment will be performed at 0 week (baseline) and at completion of 4 weeks treatment

Method of measurement

Numeric pain rating scale

Secondary outcomes**1****Description**

Range of motion

Timepoint

Assessment will be performed at 0 week (baseline) and at completion of 4 weeks of treatment

Method of measurement

Goniometer

2

Description

Functional Disability

Timepoint

Assessment will be performed at 0 week (baseline) and at completion of 4 weeks of treatment

Method of measurement

Oswestry Disability Index (ODI)

Intervention groups

1

Description

Intervention Group A (active release technique) 22 patients in Group A will receive active release technique (ART) and conventional treatment in the form of hot pack for 10-15 minutes followed by piriformis muscle stretch for 10 seconds hold (3 sets of 10 repetitions) for a duration of 15 minutes. ART will be applied with patients in prone lying with knee flexed at 90°. the therapist will place his elbow tip on taunt band of piriformis muscle and will apply direct pressure on it. Patient will be instructed to perform hip internal rotation, in order to achieve lengthening of the muscle. This will be repeated 5-7 times. The total duration of this session will be 40-50 minutes

Category

Treatment - Other

2

Description

Intervention group B (Myofascial Release Technique) 22 Patients in Group B will receive myofascial release technique (MRT) and conventional treatment in form of hot pack for 10-15 minutes over the hip region followed by piriformis muscle stretch comprising of 3 sets with 30 seconds hold of each set. For application of Myofascial release technique patient will be instructed to sit on top of foam roller that will be placed beneath the hip of affected side. Patient will be advised to roll over the foam roller for 5 – 8 minutes until his pain reduces. Leg of affected limb or side will cross towards the knee of unaffected side. Each session will last for 40-50 minutes. The session will repeat twice a week, 8 sessions over 4 weeks

Category

Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Zubaida Hospital, Tandlianwala, Faisalabad, Pakistan

Full name of responsible person

Kashmala Shafiq

Street address

Zubaida Hospital, Canal Road , near Gujjar Sweet,

Mubarak Pura, Tandlianwala

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+92 308 0967998

Email

ramishshafiq786@gmail.com

Web page address

2

Recruitment center

Name of recruitment center

Fatima Trust Hopsital, Tandlianwala Faisalabad, Pakistan

Full name of responsible person

Talha Khadam

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Street no.1, Near PULL Nehar Bangla Grid Station, Canal ROAd, Faisal Town, Tandlianwala

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Self funded

Full name of responsible person

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Web page address

<https://www.riphahfsd.edu.pk/>

Grant name

N/A

Grant code / Reference number

N/A

Is the source of funding the same sponsor organization/entity?

No

Title of funding source

N/A

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
Persons

Person responsible for general inquiries

Contact

Name of organization / entity
Riphah International University, Faisalabad
Full name of responsible person
Dr. Zainab Sheraz
Position
38000
Latest degree
Master
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Physiotherapy
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Person responsible for updating data

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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

Real patient is involved

Study Protocol

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

Statistical Analysis Plan

No - There is not a plan to make this available

Informed Consent Form

No - There is not a plan to make this available

Clinical Study Report

No - There is not a plan to make this available

Analytic Code

No - There is not a plan to make this available

Data Dictionary

No - There is not a plan to make this available