Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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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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
Age
From **20 years** old to **40 years** old
Gender
Both

Phase
N/A
Groups that have been masked

- Participant
- Outcome assessor

Sample size
Target 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
City
Faisalabad
Postal code
38000
Phone
+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
Street address
Street no.1, Near PULL Nehar Bangla Grid Station, Canal ROAd, Faisal Town, Tandlianwala
City
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38000
Phone
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maliktalhamiki@gmail.com

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Self funded
Full name of responsible person
Zainab Sheraz
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City
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Postal code
38000
Phone
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Email
zainab.48@hotmail.com
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

Other areas of specialty/work

Physiotherapy

Street address

house no. 32, street no. 2, Rehman Town, adjacent Shahzad Colony, Satyana Road, Faisalabad

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Person responsible for scientific inquiries

Contact

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Full name of responsible person

Dr. Zainab Sheraz

Position

Senior Lecturer

Latest degree

Master

Other areas of specialty/work

Physiotherapy

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Person responsible for updating data

Contact

Name of organization / entity

Riphah International University, Faisalabad

Full name of responsible person

Dr. Zainab Sheraz

Position

Senior Lecturer

Latest degree

Master

Other areas of specialty/work

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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