

Clinical Trial Protocol

Iranian Registry of Clinical Trials

11 Sep 2026

The comparative effects of Butler's neural tissue mobilization and Mulligan's bent leg raise in patients with chronic lumbar radiculopathy.

Protocol summary

Study aim

To determine the comparative effects of Butler neural tissue mobilization and Mulligan Bent leg raise in patients with chronic lumbar radiculopathy.

Design

Parallel groups, single-blind, randomized controlled trial, 62 participants were enrolled

Settings and conduct

OPD physiotherapy department Sheikh Zayed Hospital

Participants/Inclusion and exclusion criteria

Inclusion Criteria: Patients diagnosed with lumbar radiculopathy with unilateral radiating pain by an orthopedist; Aged 25-50 years; Both Male and Female; Positive neurodynamic test i.e. SLR test and Slump test. Exclusion Criteria: Patients having somatic referred pain; specific diseases of the spine like ankylosing spondylitis, Paget's disease, vertebral collapse, rheumatoid arthritis, and spondylolisthesis; spine Tb, intermittent claudication, diabetic neuropathy; Recent infection; Mental retardation; hemiparesis.

Intervention groups

Group A: The conventional treatment (hot pack and exercise) includes 10 minutes of hot pack and exercise in addition to Butler neural tissue mobilization. Group B: The conventional treatment (hot pack and exercise) contains 10 minutes of hot pack and exercise in addition to Mulligan bent leg raise, applied for pain, functional activity, and SLR.

Main outcome variables

Pain; ROM (lumber flexion, extension, SLR); Functional Disability

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20200611047734N4**

Registration date: **2021-10-13, 1400/07/21**

Registration timing: **retrospective**

Last update: **2021-10-13, 1400/07/21**

Update count: **0**

Registration date

2021-10-13, 1400/07/21

Registrant information

Name

AYESHA RAZZAK

Name of organization / entity

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Pakistan

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2020-06-28, 1399/04/08

Expected recruitment end date

2020-06-29, 1399/04/09

Actual recruitment start date

2020-06-29, 1399/04/09

Actual recruitment end date

2021-03-29, 1400/01/09

Trial completion date

2021-03-29, 1400/01/09

Scientific title

The comparative effects of Butler's neural tissue mobilization and Mulligan's bent leg raise in patients with chronic lumbar radiculopathy.

Public title

The comparative effects of Butler's neural tissue

mobilization and Mulligan's bent leg raise in patients with chronic lumbar radiculopathy.

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Patients diagnosed with lumbar radiculopathy with unilateral radiating pain by an orthopedics Age 25-50 years Both Male and Female Positive neurodynamic test i.e. SLR test and Slump test

Exclusion criteria:

Patients having Somatic referred pain Specific diseases of spine like ankylosing spondylitis, paget's disease, vertebral collapse, rheumatoid arthritis, and spondylolisthesis Tb spine, intermittent claudication, diabetic neuropathy Recent infection Mental retardation hemiparesis previous spinal Surgery Pelvis Fracture Pregnancy Red Flags such as trauma, cancer, constitutional symptoms (fever, malaise, weight loss)

Age

From **25 years** old to **50 years** old

Gender

Both

Phase

N/A

Groups that have been masked

- Participant

Sample size

Target sample size: **62**

More than 1 sample in each individual

Number of samples in each individual: **2**

31 Patients in each group was estimated by using 5% level of significance, 90% power of test

Actual sample size reached: **62**

More than 1 sample in each individual

Actual sample size in each individual: **2**

31 patients in each group was estimated by using 5% level of significance, 90% power of test

Randomization (investigator's opinion)

Randomized

Randomization description

The lottery method was used for allocating the patient in groups A or B by even and odd numbers. Participants with an even number were placed in group A and with an odd number were placed in group B.

Blinding (investigator's opinion)

Single blinded

Blinding description

It was a single-blinded study in which participant/ patients were kept blind for treatment technique. 2 different technique were provided to patients. and they were blind about that which technique was given to which patients. patients were blind regarding the technique. baseline treatment was the same, but they were not aware of the technique. which techniques they were receiving.

Placebo

Not used

Assignment

Parallel

Other design features

Parallel groups, single blinded, single setting

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Institutional Review Board

Street address

Raiwind road

City

Lahore

Postal code

55150

Approval date

2020-06-28, 1399/04/08

Ethics committee reference number

IRB-UOL-FASH/725-VIII/2020

Health conditions studied

1

Description of health condition studied

Lumber Radiculopathy

ICD-10 code

M47.26

ICD-10 code description

Other spondylosis with radiculopathy, lumbar region

Primary outcomes

1

Description

Pain

Timepoint

pre and post treatment

Method of measurement

Numeric pain rating scale

2

Description

ROM (lumber flexion, extension, SLR)

Timepoint

Pre and post treatment

Method of measurement

Goniometer , Modified Modified Schober's Test

3

Description

Functional Disability

Timepoint

pre and post treatment

Method of measurement

Oswestry Disability Index

Secondary outcomes

empty

Intervention groups**1****Description**

Intervention group: Application of conventional therapy and Butler neural tissue mobilization. Butler neural tissue mobilization procedure: Patient was in supine position. Therapist's position was standing and facing towards the patient position and positioned one hand beneath the ankle to prevent pressure on peripheral nerves and the second hand above the patella. The knee was in extended position, and hip was flexed position in one plane and the leg was take to the point where symptoms was reproduced. Dosage: Slow oscillations or sustained stretch was given by the therapist for 10 s depending on the grade of mobilization after which the leg was returned to a non-painful position. This procedure was repeated three times.

Category

Treatment - Devices

2**Description**

Intervention group: Application of conventional therapy and Mulligan bent leg raise. Mulligan bent leg raise Technique. The therapist was stand at limited SLR side of the patient. Patients was flex knee was kept over therapist's shoulder. Therapist instructed patient to push her away with patient's leg and then relax. At this point therapist extended the patient's bent knee up as far as possible in the direction of patient's ipsilateral shoulder provided there was no pain. If it was painful the direction was altered by taking the leg more medially or laterally. Dosage: Sustained stretch for several seconds was given and leg lowered down to the bed. This technique was repeated 3 times.

Category

Treatment - Devices

Recruitment centers**1****Recruitment center****Name of recruitment center**

university of Lahore

Full name of responsible person

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

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Grant name

Sonia Yasmeen

Grant code / Reference number**Is the source of funding the same sponsor organization/entity?**

Yes

Title of funding source

university of Lahore, Lahore

Proportion provided by this source

20

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**

university of Lahore, Lahore

Full name of responsible person

Sonia Yasmeen

Position

physiotherapist

Latest degree

Master

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

Yes - There is 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

Yes - There is a plan to make this available

Informed Consent Form

Yes - There is a plan to make this available

Clinical Study Report

Yes - There is a plan to make this available

Analytic Code

Yes - There is 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

The comparative effects of Butler's neural tissue mobilization and Mulligan's bent leg raise in patients with chronic lumbar radiculopathy.

When the data will become available and for how long

The study is completed and become available after its publication

To whom data/document is available

Person in academic institute. Patient data will not be shown

Under which criteria data/document could be used

Under the usage with terms in which journal is accessed /processed for publication, it could be used in the request.

From where data/document is obtainable

+923367595206 from the University office and Responsible supervisor and from a journal we will process in future

What processes are involved for a request to access data/document

Can be on call or mail It will be only used in a confidential way for improving research and benefit of humanity

Comments

Data can be provided on request