Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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

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AYESHA RAZZAQ

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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 lumber 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
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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
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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