Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Effects of Post-Isometric Relaxation Technique and Static Stretching of Quadratus Lumborum on Pain and Functional Disability in Patients with Mechanical Low Back Pain

Protocol summary

Study aim
To compare the effects of post-isometric relaxation technique and static stretching of quadratus lumborum with routine physical therapy on pain and functional disability in patients with mechanical low back pain.

Design
A concealed, randomized, single blinding, randomized clinical trail with a parallel group design of 78 patients.

Settings and conduct
Study was conducted in district head quarter hospital Narowal. Single blinding is done with blinding of assessor by labeling the experimental and control groups with unidentifying terms such as symbols or digits.

Participants/Inclusion and exclusion criteria
Participants of both gender with the age of 18 to 50 years having low back pain less than 12 weeks and visual analogue scale not less than point 3 are included in this study. Participants having specific low back pain such as lumber spondylosis, lumber canal stenosis, spondylolisthesis, sensory deficits, malignancies, tuberculosis, prolapsed intervertebral discs with instability or any radicular symptoms.

Intervention groups
Participants in control group received routine physical therapy and Participants in experimental group received Post-isometric relaxation technique and static stretching along routine physical therapy

Main outcome variables
Pain and Functional disability

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20220922056020N1**
Registration date: **2023-06-24, 1402/04/03**
Registration timing: **retrospective**

Last update: **2023-06-24, 1402/04/03**
Update count: **0**

Registration date
2023-06-24, 1402/04/03

Registrant information
Name
Rukhsar Amanat
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University Of Lahore
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Pakistan
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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2022-06-01, 1401/03/11

Expected recruitment end date
2022-07-05, 1401/04/14

Actual recruitment start date
2022-07-18, 1401/04/27

Actual recruitment end date
2022-11-05, 1401/08/14

Trial completion date
empty

Scientific title
Effects of Post-Isometric Relaxation Technique and Static Stretching of Quadratus Lumborum on Pain and Functional Disability in Patients with Mechanical Low Back Pain

Public title
Post-isometric relaxation technique in Mechanical low back pain
Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria:
low back pain less than 12 weeks. Both gender. Age 18 to 50 years. VAS not less than point 3.
Exclusion criteria:
participants having specific low back pain lumber spondylosis lumber canal stenosis sensory deficient Malignancies prolapse intervertebral discs with instability or any radicular symptoms Tuberculosis
Age
From **18 years** old to **50 years** old
Gender
Both

Phase
2
Groups that have been masked

- Data analyser

Sample size
Target sample size: **78**
Actual sample size reached: **78**
Randomization (investigator's opinion)
Randomized
Randomization description
non-probability sampling technique will be used to enroll the patients in intervention and control group and concealed envelop will be used for the random allocation. we prepare opaque envelops which contain slip of paper that indicate the treatment allocation in control and interventional group. Then randomly assign the slip of paper to envelops, ensure concealment of treatment assignment. When participant enroll, they select the envelop randomly and assign the participant to the corresponding treatment without the knowledge of allocation. Then we open the envelop in the presence of participant and reveal the treatment assignment to maintain the transparency. Then repeat the process for subsequent participants and make ensure that the randomization is concealed and unbiased throughout the research.
Blinding (investigator's opinion)
Single blinded
Blinding description
single blinding study with blinding of assessor by labeling the experimental and control groups with unidentifying terms such as symbols or digits
Placebo
Not used
Assignment
Parallel
Other design features

Secondary Ids

1

Registry name
Secondary trial Id
Registration date
empty

Ethics committees

1

Ethics committee
Name of ethics committee
Ethic committee of university of Lahore
Street address
University of lahore new campus Defence road allied bank, lahore
City
Lahore \ narowal
Postal code
12345
Approval date
2022-07-18, 1401/04/27
Ethics committee reference number
173

Health conditions studied

1

Description of health condition studied
Mechanical low back pain
ICD-10 code
M54.5
ICD-10 code description
Low back pain

Primary outcomes

1

Description
Pain
Timepoint
outcome measured first at baseline then at the follow up of 3rd week then at 6th week
Method of measurement
pain measured by visual analogue scale

2

Description
Functional disability
Timepoint
outcome measured first at baseline then at the follow up of 3rd week then at 6th week.
Method of measurement
Functional disability measured by modified oswestry disability index.

Secondary outcomes

empty

Intervention groups

1

Description
Control group: Participants received routine physical therapy which include TENS with Hot pack and exercises for the strengthening of muscles. Hot Moist pack: 10 mins for relaxing soft tissue structures and increase extensibility. Transcutaneous Electrical stimulator:10 mins for pain relief. Exercises: 10 repetitions- 5 sec hold for strengthening the muscles •Side bending •Side bridging• Pelvic bridging •Cat camel

Category
Treatment - Other

2

Description
Intervention group: Participants received Post-isometric relaxation technique and static stretching with routine physical therapy. Post-isometric relaxation technique: Thirty-nine participants received post-isometric relaxation technique for Quadratus lumborum. Position of the patient is side lying with uppermost arm fully extended. Position of the therapist; behind the patient at waist level. Inhale and abduct the uppermost leg and hold the leg and breathe for 7-10 seconds allowing the gravity to provide resistance. Patient then hang the leg behind him over the back of the table. Release the breath on slowly ceasing contraction. Therapist cradles the pelvis with both hands to take out all slack during exhalation. Hold stretch for 10 seconds. Patient relaxed for 20 seconds and same procedure was repeated for 5 times. Hot moist pack:10 mins for relaxing soft tissue structure, increases extensibility and pain relief. Transcutaneous Electrical stimulator:10 mins for pain relief. Exercises: 10 repetitions- 5 sec hold for strengthening the muscles• Side bending• Static abdominal• Static back extensor• Side bridging• Pelvic bridging• Cat camel

Category
Treatment - Other

Recruitment centers

1

Recruitment center
Name of recruitment center
District head Quater Hospital Narowal
Full name of responsible person
Essa Shoukat Ali
Street address
Circular Road, Near Jassar By-pass, District Narowal, (Punjab) - Pakistan
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
University of Lahore
Full name of responsible person
Awais Rauf
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University of lahore new campus Defence road allied bank, lahore
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Phone
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Email
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Web page address
http://www.UOLl.edu.pk
Grant name
Awais Rauf
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
University of Lahore
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
Academic

2

Sponsor
Name of organization / entity
University of Lahore
Full name of responsible person
Awais Rauf
Street address
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Web page address
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Grant name
Awais Rauf
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
University of Lahore
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
Academic

Person responsible for general inquiries

Contact
Name of organization / entity
University of Lahore
Full name of responsible person
Rukhsar Amanat
Position
Student
Latest degree
Master
Other areas of specialty/work
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Person responsible for updating data

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Other areas of specialty/work
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Sharing plan

Deidentified Individual Participant Data Set (IPD)
Undecided - It is not yet known if there will be 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
Undecided - It is not yet known if there will be a plan to make this available
Informed Consent Form
Undecided - It is not yet known if there will be 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