Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Effects of Muscle energy technique and Dry needling of active trigger points of Quadratus Lumborum in Lower back pain

Protocol summary

Study aim
The aim of this study is to determine the effects of muscle energy technique and dry needling of active trigger points of quadrats lumborum in low back pain

Design
Randomised, superiority, parallel group trial with blinded outcome assessment. Randomisation was centralised and computerised with concealed randomisation sequence carried out at an external site

Settings and conduct
participants, healthcare providers (Physicians, nurses, etc.) who care for participants during the trial, data collectors, outcome assessors, and with lessor importance Data Safety and Monitoring Board and manuscript writers.

Participants/Inclusion and exclusion criteria
INCLUSION CRITERIA: 1. Subjects between 18 to 60 year of age 2. Both gender (Male & Female) 3. Participants have mechanical lower back pain of at least two-months duration, initial MODI Score: 30%-60% 4. Participants have an active trigger point in quadratus lumborum muscle according to Travell and Simons diagnostic critaria EXCLUSION CRITERIA: 1. Anticoagulation or bleeding disorders. 2. Acute muscle trauma. 3. Local or systemic infections 4. Lumbar disc herniation 5. Spinal deformities 6. Any spinal surgery history 7. Any participant taking anticoagulation medication

Intervention groups
Muscle Energy Technique (Post isometric relaxation) Dry Neeedling

Main outcome variables
Numeric Pain Rating Scale (NPRS) Modified Oswestry disability index (MODI) Pain Pressure Algometer

General information

Reason for update

Acronym
Muscle Energy Technique and Dry needling comparison study

IRCT registration information
IRCT registration number: **IRCT20200221046566N1**
Registration date: **2020-06-23, 1399/04/03**
Registration timing: **prospective**

Last update: **2020-06-23, 1399/04/03**
Update count: **0**

Registration date
2020-06-23, 1399/04/03

Registrant information

Name
Hamna Zahid

Name of organization / entity
Riphah International University Lahore

Country
Pakistan

Phone
+92 42 35956589

Email address
hamnazahid71@gmail.com

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2020-07-01, 1399/04/11

Expected recruitment end date
2020-07-30, 1399/05/09

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
Effects of Muscle energy technique and Dry needling of active trigger points of Quadratus Lumborum in Lower

back pain

Public title
Effects of Muscle energy technique and Dry needling of active trigger points of Quadratus Lumborum in Lower back pain

Purpose
Treatment

Inclusion/Exclusion criteria

Inclusion criteria:
Participants have mechanical lower back pain of at least two-months duration, initial MODI Score: 30%-60% Participants have an active trigger point in quadratus lumborum muscle according to Travell and Simons diagnostic criteria Patient is otherwise medically fit to perform physical training

Exclusion criteria:
Anticoagulation or bleeding disorders Acute muscle trauma Local or systemic infections Lumbar disc herniation Spinal deformities Any spinal surgery history Any participant taking anticoagulation medication

Age
From **18 years** old to **60 years** old

Gender
Both

Phase
N/A

Groups that have been masked

- Participant
- Care provider
- Outcome assessor
- Data analyser
- Data and Safety Monitoring Board

Sample size
Target sample size: **24**

Randomization (investigator's opinion)
Randomized

Randomization description
Written informed consent will be taken. After enrollment into study, patient will be allocated either to group A or Group B by lottery method. No. of Chits will be equal to total sample size, odd Numbers will be allocated to Group A and even number will be allocated to Group B. Each patient will be requested to draw a chit from the box and after that patient will be recruited into either Group A or Group B

Blinding (investigator's opinion)
Double blinded

Blinding description
participants, healthcare providers (Physicians, nurses, etc.) Assessor Blind: Data safety will be ensured by assigning Specific Identity numbers and all consent, readings forms will be placed in locker to blind Assessors

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
secretary ethical review committee, Riphah College of Rehabilitation and Allied Health Sciences

Street address
28-M, Quaid-e-Azam Industrial Estate, Kot Lakhpat, Lahore

City
Lahore

Postal code
54000

Approval date
2020-02-08, 1398/11/19

Ethics committee reference number
REC/RCRS/20/1035

Health conditions studied

1

Description of health condition studied
Low back pain due to trigger points of quadratus lumborum

ICD-10 code
M54.5

ICD-10 code description
Low back pain

Primary outcomes

1

Description
Pain

Timepoint
before intervention and 1, 3, 6 weeks after intervention

Method of measurement
Numeric Pain Rating Scale

2

Description
Function

Timepoint
before intervention and 1, 3, 6 weeks after intervention

Method of measurement
Modified Oswestry disability index

Secondary outcomes

1

Description
Trigger Points Sensitivity

Timepoint
before intervention and 1, 3 , 6 weeks after intervention
Method of measurement
Pain Pressure Algometer

Intervention groups

1

Description
Intervention group: Dry Needling of Quadratus Lumborum
Category
Treatment - Other

2

Description
Intervention group: Muscle Energy Technique (METs) of Quadratus Lumborum
Category
Treatment - Other

Recruitment centers

1

Recruitment center
Name of recruitment center
Max Rehab Center, Lahore Pakistan
Full name of responsible person
Muhammad Hashim
Street address
393-D3 wapda Town Lahore
City
Lahore
Postal code
54000
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+92 42 35126110
Email
chistisalman@yahoo.com

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Riphah International University
Full name of responsible person
Muhammad Salman Bashir
Street address
28-M Quaid-e-Azam Industrial Estate, Kot Lakhpat, Lahore
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chistisalman@yahoo.com
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Riphah International University
Proportion provided by this source
20
Public or private sector
Private
Domestic or foreign origin
Foreign
Category of foreign source of funding
Sponsor: country of origin
Country of origin
PK
Type of organization providing the funding
Academic

Person responsible for general inquiries

Contact
Name of organization / entity
Riphah International University
Full name of responsible person
Muhammad Salman Bashir
Position
Associate professor
Latest degree
Ph.D.
Other areas of specialty/work
Physiotherapy
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Person responsible for updating data

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Bachelor
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