Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Effects of Lumbar Sustained Natural Appophyseal Glide versus Muscle energy techniques on pain, Range of Motion and function in chronic Nonspecific Low Back Pain.

Protocol summary

Study aim
To compare the effects of Lumbar Sustained Natural Appophyseal Glide and Muscle energy techniques on pain, Range of Motion and function in chronic nonspecific low back pain.

Design
Two parallel group , double blinded, randomized clinical trial with pre and post assessment

Settings and conduct
Riphah Rehab clinic. Participants and outcome 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

Participants/Inclusion and exclusion criteria
INCLUSION CRITERIA: 1. Subject between the ages 25 to 60. 2. Both male and female patients with low back pain. 3. Subject with history of 3 months continues or intermittent symptoms of low back pain. 4. The flexion of trunk at least 40-degree ROM. EXCLUSION CRITERIA: 1. Patient with history of pathology of spine (spine tumors,spinal infections, spondylosis, neurological deficit, pregnant women). 2. Patient pain will radiate down to the knee. 3. History of spinal surgery.

Intervention groups
Intervention group A: lumber sustained natural appophyseal glide and conventional treatment. Intervention group B:Muscle Energy Technique (METs) of Quadratus Lumborum and conventional treatment.

Main outcome variables
Numeric Pain Rating scale (NPRS),Modified Oswestry disability index (MODI),Lumber inclinometer

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20200228046639N1**
Registration date: **2020-09-22, 1399/07/01**
Registration timing: **registered_while_recruiting**

Last update: **2020-09-22, 1399/07/01**
Update count: **0**

Registration date
2020-09-22, 1399/07/01

Registrant information

Name
Assra Noor Javed

Name of organization / entity
Riphah International University

Country
Pakistan

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+92 52 3582055

Email address
assra.khan.ak@gmail.com

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2020-07-08, 1399/04/18

Expected recruitment end date
2020-12-30, 1399/10/10

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
Effects of Lumbar Sustained Natural Appophyseal Glide versus Muscle energy techniques on pain, Range of

Motion and function in chronic Nonspecific Low Back Pain.

Public title
Effects of Lumbar Sustained Natural Appophyseal Glide and Muscle energy technique in Low Back Pain.

Purpose
Treatment

Inclusion/Exclusion criteria

Inclusion criteria:
Subject between the ages 25 to 60. Both male and female patients with low back pain. Subject with history of 3 months continues or intermittent symptoms of low back pain. The flexion of trunk at least 40-degree ROM.

Exclusion criteria:
Patient with history of pathology of spine (spine tumors,spinal infections, spondylosis, neurological deficit, pregnant women). Patient pain will radiate down to the knee. History of spinal surgery.

Age
From **25 years** old to **60 years** old

Gender
Both

Phase
N/A

Groups that have been masked

- Participant
- Outcome assessor

Sample size
Target sample size: **36**

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
Participant, 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
Research Ethical Committee (REC), Riphah College of Rehabilitation Sciences,Lahore campus

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/20/1034

Health conditions studied

1

Description of health condition studied
Chronic nonspecific low back pain

ICD-10 code
M54.5

ICD-10 code description
Low back pain

Primary outcomes

1

Description
Pain

Timepoint
First (pre/post) and third and sixth week

Method of measurement
Numeric Pain Rating Scale

2

Description
Range of motion for flexion and extension

Timepoint
First (pre/post) and third and sixth week

Method of measurement
Lumber inclinometer

Secondary outcomes

1

Description
Function

Timepoint
First (pre/post) and third and sixth week

Method of measurement
Modified Oswestry disability index

Intervention groups

1

Description

Intervention group:Lumber sustained natural appophyseal glide SNAG on Lumber L4/L5 vertebrae. The subjects will receive mulligan concept SNAG (sustained natural Appophyseal glide) position of subject: sitting on the edge of table and both feet will be support on footstep. The therapist must be standing behind the subject and place a belt around the subject's lower abdomen (below the anterior superior illac spine) also the therapist below hips. The Ulnar border of therapist right hand will be placed under the spinous process of vertebra above the suspected spinal segment. The other hand will be placed on the bed to the left of subject. The mobilizing force will be parallel to the facet joint plan in cephalic direction and asked the subject to lean forward. Sustained the flexed position for few seconds and maintain the facet glide until the subject erect.

Category

Treatment - Other

2

Description

Intervention group:The subject will receive METS on Quadrates lumborum (post isometric relaxation technique) position of subject: side lying and the physiotherapist behind the subject at waist level. the subject will extend uppermost arm over the head to grasp the top end of the table and on inhalation subject will abduct his uppermost leg until the therapist palpates quadrates activity(elevated around 30◦).the subject is asked to hold the leg isometricaly in this state and allowing gravity to provide resistance. After 10 sec the subject let the leg to fall toward the floor.

Category

Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center
Riphah Rehab Center, Lahore Pakistan

Full name of responsible person
Muhammad Hashim

Street address
393-D3 wapda Town Lahore

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Lahore

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54770

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Riphah International University

Full name of responsible person
Muhammad Salman Bashir

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

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

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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