

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 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

Phone

+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 isometrically 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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54770

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chistisalman@yahoo.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Riphah International University

Full name of responsible person

Muhammad Salman Bashir

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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

Street address

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

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Person responsible for updating data

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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