

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

09 Jun 2026

### Effects of Sustained Natural Apophyseal Glides with and without Thoracic Postural Correction Techniques on Pain, Range of Motion and Disability in Patients with Mechanical Neck Pain

#### Protocol summary

##### Study aim

To determine the effects of Sustained Natural Apophyseal Glides with and without thoracic postural correction techniques on mechanical neck pain

##### Design

The study design will be a Randomized Controlled Trial with a parallel group design of 28 patients.

##### Settings and conduct

The study setting will be International Therapy Services ITS Clinic, Lahore. The sample would be taken by using a non-probability convenience sampling technique.

##### Participants/Inclusion and exclusion criteria

Inclusion Criteria: • Individuals having localized pain or stiffness in the spine or both combined b/w C3 to C7 without upper limbs radiculopathy • Patients with chronic neck pain >3 months • Pain reported on NPRS score  $\geq 3$  in the neck region with a limited or painful range  
Exclusion Criteria: • Tuberculosis, carcinoma, heart disease, osteoporosis. • Neural disorders • Any trauma or localized infection in the neck region, cervical stenosis, metabolic diseases in bone and joint. • Hyper flexibility • Open sores • Ongoing radiotherapy, chemotherapy, steroid therapy, or anticoagulants. • Allergy to hot pack • Patients with a history of surgery in the cervical spine region within a year

##### Intervention groups

Group A will receive combination of a sustained facet glide with movement applied at the facet joints between cervical C3 to C7. Group B will receive sustained natural apophyseal glides same as group A along thoracic postural correction technique. Thoracic postural correction technique includes active as well as therapist-facilitated stretches.

##### Main outcome variables

Pain, Range of Motion and Disability

#### General information

##### Reason for update

Trial has been completed.

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20190717044238N5**

Registration date: **2023-03-06, 1401/12/15**

Registration timing: **registered\_while\_recruiting**

Last update: **2023-09-24, 1402/07/02**

Update count: **1**

##### Registration date

2023-03-06, 1401/12/15

##### Registrant information

##### Name

Fareeha Amjad

##### Name of organization / entity

The University of Lahore

##### Country

Pakistan

##### Phone

+92 42 99200600

##### Email address

fari\_fairy22@yahoo.com

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2023-03-01, 1401/12/10

##### Expected recruitment end date

2023-06-30, 1402/04/09

##### Actual recruitment start date

2023-03-05, 1401/12/14

##### Actual recruitment end date

2023-06-25, 1402/04/04

**Trial completion date**

2023-08-05, 1402/05/14

**Scientific title**

Effects of Sustained Natural Apophyseal Glides with and without Thoracic Postural Correction Techniques on Pain, Range of Motion and Disability in Patients with Mechanical Neck Pain

**Public title**

Sustained Natural Apophyseal Glides and Thoracic Posture Correction Technique on Mechanical Neck Pain

**Purpose**

Treatment

**Inclusion/Exclusion criteria****Inclusion criteria:**

Individuals having localized pain or stiffness in spine or both combined b/w C3 to C7 without upper limbs radiculopathy Patients with chronic neck pain >3 months Pain reported on NPRS score  $\geq 3$  in neck region with limited or painful range of motion Painful and limited cervical range of motion

**Exclusion criteria:**

Tuberculosis, carcinoma, heart disease, osteoporosis Neural disorders Any trauma or localized infection in neck region, cervical stenosis, metabolic diseases in bone and joint Hyper flexibility Open sores Ongoing radiotherapy, chemotherapy, steroid therapy or anticoagulants Allergy to hot pack Patients with history of surgery in cervical spine region with in a year

**Age**

From **18 years** old to **70 years** old

**Gender**

Both

**Phase**

3

**Groups that have been masked**

- Outcome assessor

**Sample size**

Target sample size: **28**

Actual sample size reached: **28**

**Randomization (investigator's opinion)**

Randomized

**Randomization description**

Patients will be assigned to either control or treatment group by random selection using a computer-generated table of random numbers. These numbers will be placed inside sealed envelopes. Another individual, who is not involved in the research, will then open these envelopes and assign the patients to their respective groups based on the instructions provided.

**Blinding (investigator's opinion)**

Single blinded

**Blinding description**

A skilled and experienced physiotherapist, who is not connected to the study, will making assessments on outcomes or gathering data on outcome variables.

**Placebo**

Not used

**Assignment**

Parallel

**Other design features****Secondary Ids**

empty

**Ethics committees****1****Ethics committee****Name of ethics committee**

Riphah College of Rehabilitation and Allied Health Sciences Lahore

**Street address**

F83G+V25, Madar-e-Millat Road, Quaid-e-Azam Industrial Estate Quaid e Azam Industrial Estate, Lahore, Punjab

**City**

Lahore

**Postal code**

54000

**Approval date**

2023-01-02, 1401/10/12

**Ethics committee reference number**

REC/RCR & AHS/23/0113

**Health conditions studied****1****Description of health condition studied**

Mechanical neck pain

**ICD-10 code**

M54.2

**ICD-10 code description**

Cervicalgia

**Primary outcomes****1****Description**

Functional disability

**Timepoint**

6 weeks

**Method of measurement**

Neck Disability Index is a self-report questionnaire designed to determine how neck pain affects a patient's daily life and the disability of patients with neck pain. It consists of 10 questions that ask about activities of daily living. More the score, the more significant the disability. The sample questionnaire is attached at the end. Four sections relate to subjective symptoms, and the remaining 6 sections relate to activities of daily living. Each unit is scored from 0 to 5 points, giving a maximum score of 50. The total score of the neck disability index ranges from 0 to 50 points

**2****Description**

Pain

**Timepoint**

6 weeks

**Method of measurement**

Patient level of pain will be assessed using this scale. This scale ranges from 0 to 10. 0 indicates “no pain” and 10 indicates “worst pain”

**3**

**Description**

Range of motion

**Timepoint**

6 weeks

**Method of measurement**

Changes from the Baseline ROM range of Motion of Cervical spine will be taken with the Help of Goniometer

**Secondary outcomes**

empty

**Intervention groups**

**1**

**Description**

Intervention group: Group A will receive conventional therapy (Hot pack and Transcutaneous Electrical Nerve Stimulation) along sustained natural apophyseal glides. Sustained facet glide with movement will be applied at the facet joint between cervical C3 to C7. It will be performed in sitting or standing position of the patient. Sustained Natural Apophyseal Glides involves application of accessory passive glide to cervical vertebrae by a physiotherapist while the patient will simultaneously perform an active movement. Glide given is in the direction of the plane of facet joints, and technique is usually performed in weight-bearing position like standing, sitting etc. Patients in control group will receive treatment for alternate days, 3 days a week for 6 weeks

**Category**

Treatment - Other

**2**

**Description**

Intervention group: Group B will receive conventional therapy same as group A with sustained natural apophyseal glides and thoracic posture correction technique. Thoracic postural correction technique includes active as well as therapist-facilitated stretches. Active stretches will be thoracic extension in sitting, Wall angle stretch and Corner stretch, while the therapist-facilitated stretches will be seated mid-thoracic stretch and prone mid thoracic stretch. Stretches will be maintained for 15- 20 seconds with 10 repetitions of each stretch per session. Patients in control group will receive treatment for alternate days, 3 days a week for 6 weeks.

**Category**

Treatment - Other

**Recruitment centers**

**1**

**Recruitment center**

**Name of recruitment center**

International Therapy Services

**Full name of responsible person**

Dr. Tayyab Malik

**Street address**

International Therapy Services UET Lahore

**City**

Lahore

**Postal code**

54000

**Phone**

+92 306 2149648

**Email**

itsclinicpak@gmail.com

**Sponsors / Funding sources**

**1**

**Sponsor**

**Name of organization / entity**

Riphah International University Lahore

**Full name of responsible person**

Dr. Fareeha Amjad

**Street address**

Riphah Quaid e Azam Campus, 28-M Quaid-e-Azam industrial Estate, kot lakhpat, Lahore

**City**

Lahore

**Postal code**

54000

**Phone**

+92 334 3372779

**Email**

fari\_fairy22@yahoo.com

**Grant name**

**Grant code / Reference number**

**Is the source of funding the same sponsor organization/entity?**

No

**Title of funding source**

Riphah International University 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**

Riphah International University

**Full name of responsible person**

Rameen Qayyum

**Position**

Student

**Latest degree**

Master

**Other areas of specialty/work**

Physiotherapy

**Street address**

26-D Architect Society Lahore

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Lahore

**Province**

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**Postal code**

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**Person responsible for scientific inquiries****Contact****Name of organization / entity**

Riphah International University

**Full name of responsible person**

Dr. Fareeha Amjad

**Position**

Assistant Professor

**Latest degree**

Ph.D.

**Other areas of specialty/work**

Physiotherapy

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**Person responsible for updating data****Contact****Name of organization / entity**

Riphah International University, Lahore

**Full name of responsible person**

Rameen Qayyum

**Position**

Student

**Latest degree**

Master

**Other areas of specialty/work**

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**Email**

rameenqayyum95@gmail.com

**Sharing plan****Deidentified Individual Participant Data Set (IPD)**

Yes - There is a plan to make this available

**Study Protocol**

Yes - There is a plan to make this available

**Statistical Analysis Plan**

No - There is not 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**

Not applicable

**Data Dictionary**

Yes - There is a plan to make this available

**Title and more details about the data/document**

Consent Form in its original format with no information about any participant study protocol- how the intervention was given to both groups

**When the data will become available and for how long**

Data would be available after the completion of the research at the end of 2023

**To whom data/document is available**

People working in an academic and clinical setting can have access to the above-mentioned information/documents

**Under which criteria data/document could be used**

Data can only be used for Research Purposes

**From where data/document is obtainable**

Data can be asked for at the following email address: rameenqayyum95@gmail.com

**What processes are involved for a request to access data/document**

One can ask for data at the given email address and it would be provided after knowing the general implications of sharing that particular data.

**Comments**