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 ˃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

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+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 ˃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

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Lahore

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Phone

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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

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Lahore

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54000

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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
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Person responsible for updating data

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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