

Clinical Trial Protocol

Iranian Registry of Clinical Trials

09 Jun 2026

Comparative Effects of Strain Counterstain and Post-Isometric Relaxation Techniques on Pain, Range of motion and Functional Disability in Patients with Upper Cross Syndrome

Protocol summary

Study aim

To determine the comparative effects of strain counterstain and post-isometric relaxation techniques on pain, range of motion and functional disability in patients with upper cross syndrome.

Design

This study will be Randomized Clinical Trial, parallel-group, triple blinded

Settings and conduct

The Trial would be conducted in District Headquarters DHQ Hospital OKARA City

Participants/Inclusion and exclusion criteria

inclusion criteria □ Individuals with chronic neck pain from > 6 weeks □ Both male and female gender □ Age from 20-40 years □ Neck Pain on > 3 on numerical pain rating scale □ Individuals diagnosed with craniovertebral angle less than 50cm □ Occiput to wall distance greater than 2cm exclusion criteria □ Subjects who will have signs of recent surgery □ Whiplash injury or open wounds □ Cervical spine pathologies like radiculopathies disc herniation, spondylolisthesis, sensory changes in neck region □ Any neurological defect

Intervention groups

Group A will receive strain counterstain technique; the position of ease will be produced through positioning the muscle in relaxed/ shortened position, ease will be defined as where a reduction in pain at least 70% then, pressure is applied to Trp and it will be held for 90-120 seconds with 3-5 repetitions per treatment session (three session per week for 3 weeks). Group B will receive post-isometric relaxation technique with 3-5 muscle contraction at sub maximal pain-free effort (20% of available strength) with 5-7 seconds for 5 repetitions per treatment session (three sessions per week for 3 weeks).

Main outcome variables

Pain; Range of motion; Functional disability

General information

Reason for update

Acronym

randomized clinical trial

IRCT registration information

IRCT registration number: **IRCT20190717044238N6**

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

Registration timing: **registered_while_recruiting**

Last update: **2023-03-06, 1401/12/15**

Update count: **0**

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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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

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparative Effects of Strain Counterstain and Post-Isometric Relaxation Techniques on Pain, Range of motion and Functional Disability in Patients with Upper Cross Syndrome

Public title

Comparative Effects of Strain Counterstain and Post-Isometric Relaxation Techniques on Pain, Range of motion and Functional Disability in Patients with Upper Cross Syndrome

Purpose

Treatment

Inclusion/Exclusion criteria**Inclusion criteria:**

Individuals with chronic neck pain from > 6 weeks Both male and female gender Age from 20-40 years Neck Pain on > 3 on numerical pain rating scale Individuals diagnosed with craniovertebral angle less than 50cm Occiput to wall distance greater then 2 cm

Exclusion criteria:

Subjects who will have signs of recent surgery Whiplash injury or open wounds Cervical spine pathologies like radiculopathies disc herniation, spondylolisthesis, sensory changes in neck region Any neurological defect

Age

From **20 years** old to **40 years** old

Gender

Both

Phase

3

Groups that have been masked

- Participant
- Outcome assessor
- Data analyser

Sample size

Target sample size: **70**

Randomization (investigator's opinion)

Randomized

Randomization description

As per the inclusion and exclusion criteria of the study , patients will be divided into two groups randomly by Random Number Generator table

Blinding (investigator's opinion)

Triple blinded

Blinding description

The patients taking part in the study would be blinded, they would not be able to know the group they have been allocated to, either Strain Counterstain and Post - Isometric Relaxation Techniques, The assessor of the outcomes would be blinded and lastly, out data analyzer would be blinded too, making it a triple blinded clinical trial

Placebo

Not used

Assignment

Parallel

Other design features

This study will be Randomized Clinical Trial, parallel-group, triple blinded (patients, assessor and data analyzer will make it triple blinded)

Secondary Ids

empty

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

Ripah 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/23/0110

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

Upper Cross Syndrome

ICD-10 code**ICD-10 code description****Primary outcomes****1****Description**

Functional Disability

Timepoint

Total intervention protocol will be given for three weeks of duration, 3 sessions per week for three weeks, Outcomes will be assessed at Baseline, at the end of 3 week(last treatment session) and at the end of 6th week

Method of measurement

NDI is the self-report questionnaire that is designed to determine how the neck pain affects a patient's daily life and the disability of patients with neck pain. It consists of 10 questions that ask about ADLS. More the score, greater was the disability. 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 section is scored from 0 to 5 points, giving a maximum score of 50. The total score of the NDI ranges from 0 to 50 points

Secondary outcomes

1

Description

Pain

Timepoint

Total intervention protocol will be given for three weeks of duration, 3 sessions per week for three weeks, Outcomes will be assessed at Baseline, at the end of 3 week (last treatment session) and at the end of 6th week

Method of measurement

Patient level of pain will be assessed using Numerical Pain Rating Scale (NPRS) This scale ranges from 0 to 10. 0 indicates “no pain” and 10 indicates “worst pain”

2

Description

Range of Motion

Timepoint

Total intervention protocol will be given for three weeks of duration, 3 sessions per week for three weeks, Outcomes will be assessed at Baseline, at the end of 3 week (last treatment session) and at the end of 6th week

Method of measurement

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

Intervention groups

1

Description

Intervention group: group A will receive strain counterstrain technique; the position of ease will be produced through positioning the muscle in relaxed/shortened position, ease will be defined as where a reduction in pain at least 70% then, pressure is applied to Trp and it will be held for 90-120 seconds with 3-5 repetitions per treatment session (three session per week for 3 weeks)

Category

Treatment - Other

2

Description

Intervention group: group B will receive post-isometric relaxation technique with 3-5 muscle contraction at sub maximal pain-free effort (20% of available strength) with 5-7 seconds for 5 repetitions per treatment session (three sessions per week for 3 weeks).

Category

Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center

DHQ hospital Okara

Full name of responsible person

Dr Zaheer Abbas khan

Street address

RC6R+QVF, Eid Gah Rd okara, Punjab

City

okara

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Phone

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zeeokg@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Ripah international university

Full name of responsible person

Dr. Fareeha Amjad

Street address

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Phone

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fareeha.amjad@ripah.edu.pk

Grant name

Grant code / Reference number

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

No

Title of funding source

Ripah international university

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

Ripah international university

Full name of responsible person

Anila Ramzan

Position

student
Latest degree
Master
Other areas of specialty/work
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Person responsible for scientific inquiries

Contact

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Person responsible for updating data

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City
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Province
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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

Yes - There is 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

Yes - There is a plan to make this available

Data Dictionary

Yes - There is a plan to make this available

Title and more details about the data/document

All collected identified IPD

When the data will become available and for how long

Data will be available after the completion of study and will remain available till 6 months

To whom data/document is available

Data will be available for other people almost 6 months after the completion of study

Under which criteria data/document could be used

The data/document could be used by communicating with the principle investigator Hadiqa Naeem on email address hadiqa621@gmail.com

From where data/document is obtainable

Hadiqa Naeem , hadiqa621@gmail.com

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

The data/document could be used by communicating with the principle investigator Hadiqa Naeem on email address hadiqa621@gmail.com

Comments