

Clinical Trial Protocol

Iranian Registry of Clinical Trials

11 Sep 2026

Effects of muscle energy techniques versus corrective exercise programme on pain, range of motion and function in patients with upper cross syndrome: A randomized clinical trial.

Protocol summary

Study aim

To compare the effects of Muscle energy techniques with Corrective exercise programme on pain, range of motion, function.

Design

Randomized Clinical Trial

Settings and conduct

Department of Physiotherapy, University of Lahore Teaching Hospital, Lahore.

Participants/Inclusion and exclusion criteria

Neck disability index (NDI) score > 30 % (Mild to Moderate disability). Patients diagnosed with upper cross syndrome and having neck pain (Pain intensity on Visual Analogue Scale (VAS) > 3)/History of surgery or fracture or joint diseases of the spine Osteoporosis, Acute rheumatoid arthritis, Blood diseases

Intervention groups

Group A: Patients in group A will be treated with routine physiotherapy program (30 minutes) combined with muscle energy techniques (METS) (30 minutes) three sessions per week for 8 weeks. Group B: Patients in group B will be treated with routine physiotherapy program (30 minutes) combined with National Academy of Sports Medicine (NASM) based protocol (30 minutes) three sessions per week for 8 weeks.

Main outcome variables

Visual analogue scale Intensity or severity of pain will be measured through Visual analogue scale. Inclinator Cervical range of motion will be measured through inclinometer. Neck disability index (NDI) To determine the extent of disability and activity limitations due to neck pain and disability, the Neck Disability Index (NDI) will be used.

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20210816052201N1**

Registration date: **2021-09-06, 1400/06/15**

Registration timing: **registered_while_recruiting**

Last update: **2021-09-06, 1400/06/15**

Update count: **0**

Registration date

2021-09-06, 1400/06/15

Registrant information

Name

Sana Akram

Name of organization / entity

The University of Lahore, Lahore Pakistan

Country

Pakistan

Phone

+92 42 35183083

Email address

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2021-06-19, 1400/03/29

Expected recruitment end date

2021-09-14, 1400/06/23

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effects of muscle energy techniques versus corrective exercise programme on pain, range of motion and function in patients with upper cross syndrome: A randomized clinical trial.

Public title

Effects of muscle energy techniques versus corrective exercise programme on pain, range of motion and function in patients with upper cross syndrome: A randomized clinical trial.

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

NDI score > 30 % (Mild to Moderate disability) Patients diagnosed with upper cross syndrome neck pain (Pain intensity VAS intensity > 3) from minimum 4 to 12 weeks

Exclusion criteria:

History of surgery or fracture or joint diseases of the spine Osteoporosis Acute rheumatoid arthritis Congestive heart failure Blood diseases Malignancy Severe skin sensitization mental illness Frozen Shoulder

Age

From **20 years** old to **35 years** old

Gender

Both

Phase

2-3

Groups that have been masked

- Outcome assessor

Sample size

Target sample size: **50**

Randomization (investigator's opinion)

Randomized

Randomization description

Patients will be randomly allocated in two experimental groups by computer generated table number. After randomization, opaque sealed envelope will be offered to the patients. The treatment will be provided according to the group mention on the envelope. Group A will be treated with routine physiotherapy program combined with muscle energy techniques (METS) Group B will be treated with routine physiotherapy program combined with National Academy of Sports Medicine (NASM) based protocol.

Blinding (investigator's opinion)

Single blinded

Blinding description

A single blinded randomized clinical trial study will be carried out on patients having neck pain secondary to upper cross syndrome. Patients will be recruited from Department of Physiotherapy, University of Lahore Teaching Hospital, Lahore. They will be assessed on selection criteria and eligible participants will be randomly allocated into two groups, using sealed enveloped method. Patients will be treated three times a week for total 8 weeks. After allocation in groups, participants will be assessed at baseline. Afterwards data will be collected at 4-week intervals until the conclusion of 8-week of interventions. For assessing long term effects of treatment protocol patients will be reassessed

at 4-week interval after last treatment session. All assessments will be performed by the same assessor at all stages of data collection for all patients.

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of University of Lahore(Institutional Review Board)

Street address

UNIVERSITY OF LAHORE

City

LAHORE

Postal code

54000

Approval date

2021-06-17, 1400/03/27

Ethics committee reference number

883

Health conditions studied

1

Description of health condition studied

Upper Cross Syndrome

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

Pain, Neck Disability, Cervical Range Of Motion

Timepoint

Patients will be treated three times a week for total 8 weeks. After allocation in groups, participants will be assessed at baseline and comparability will be checked. Afterwards data will be collected at 4-week intervals until the conclusion of 8-week of interventions. For assessing long term effects of treatment protocol patients will be reassessed at 4-week interval after last treatment session. All assessments will be performed by the same assessor at all stages of data collection for all patients

Method of measurement

Visual analogue scale for Pain, Cervical range of motion will be measured through inclinometer, Function will be measured by the Neck Disability Index (NDI)

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: 1(Routine physical therapy + Muscle Energy Techniques)

Category

Treatment - Other

2

Description

Intervention group: (Routine physical therapy + National Academy of Sports Medicine (NASM) based exercise programme)

Category

Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center

The university of Lahore Teaching Hospital

Full name of responsible person

SANA AKRAM

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

The University of Lahore

Full name of responsible person

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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

The University of 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

University of Lahore

Full name of responsible person

Professor Dr. Ashfaq Ahmed

Position

Professor

Latest degree

Ph.D.

Other areas of specialty/work

Physiotherapy

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Person responsible for scientific inquiries

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Full name of responsible person

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Position

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Latest degree

Ph.D.

Other areas of specialty/work

Physiotherapy

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Person responsible for updating data

Contact

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Position
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Sharing plan

Deidentified Individual Participant Data Set (IPD)

Yes - There is 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

Title and more details about the data/document

EFFECTS OF MUSCLE ENERGY TECHNIQUES VERSUS
CORRECTIVE EXERCISE PROGRAMME ON PAIN, RANGE OF
MOTION AND FUNCTION IN PATIENTS WITH UPPER CROSS
SYNDROME: A RANDOMIZED CLINICAL TRIAL

When the data will become available and for how long

After publication of article the data will be available

To whom data/document is available

The data will be available to all kinds of Academic researchers.

Under which criteria data/document could be used

A request can be processed by the study sponsor or by a delegate of the sponsor (e.g., an academic institution).

From where data/document is obtainable

Applicant must contact cores ponder of a research through email address

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

Applicant must contact cores ponder of a research through email address

Comments