Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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. Inclinometer 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
sana.akram@uipt.uol.edu.pk

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
Street address
UNIVERSITY OF LAHORE
City
LAHORE
Postal code
54000
Phone
+92 42 32560865
Email
sana.akrampt@gmail.com

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
The University of Lahore
Full name of responsible person
Professor Dr. Ashfaq Ahmed
Street address
UNIVERSITY OF LAHORE
City
LAHORE
Postal code
54000
Phone
+92 42 32560865
Email
ashfaq.ahmad@uipt.uol.edu.pk
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
Street address
UNIVERSITY OF LAHORE
City
LAHORE
Province
PUNJAB
Postal code
54000
Phone
+92 42 35183083
Email
ashfaq.ahmad@uipt.uol.edu.pk

Person responsible for scientific inquiries

Contact
Name of organization / entity
The University of Lahore, Lahore Pakistan
Full name of responsible person
Profesor Dr. Ashfaq Ahmed
Position
Professor
Latest degree
Ph.D.
Other areas of specialty/work
Physiotherapy
Street address
UNIVERSITY OF LAHORE
City

LAHORE

Province
PUNJAB

Postal code
54000

Phone
+92 42 35183083

Fax

Email
ashfaq.ahmad@uipt.uol.edu.pk

Person responsible for updating data

Contact

Name of organization / entity
The University of Lahore, Lahore Pakistan

Full name of responsible person
Arooj Hanif

Position
Investigator

Latest degree
Bachelor

Other areas of specialty/work
Physiotherapy

Street address
UNIVERSITY OF LAHORE

City
LAHORE

Province
PUNJAB

Postal code
54000

Phone
+92 42 111 865 865

Fax

Email
arooj.hanif@uipt.uol.edu.pk

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