Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Immediate effects of muscle energy techniques and conventional physical therapy versus conventional physical therapy alone on pain and range of motion in patients with chronic mechanical neck pain: A randomized controlled trial

Protocol summary

Study aim
Muscle energy technique is an emerging type of manual therapy. It is not common in clinical setups. Nowadays, clients and patients want results of a treatment on the spot. So, the scholar want to find out immediate effects of MET on cervical pain and range of motion

Design
This study will have 2 groups. A will be experimental group and B control . Sample size: 50 Randomization: will be done using lottery method Center: Single center

Settings and conduct
(Hayatabad medical complex, MTI, Peshawar)

Participants/Inclusion and exclusion criteria
Inclusion criteria: Male and female, Age 18-50 years, Subjects having neck pain from previous 3 or more than 3 months Exclusion criteria: Cervical radiculopathy or disc prolapse, trauma, bone fractures, joint dislocation or cervical instability, dermatitis, abnormal sensations, active bleeding and open wounds, History of the neck surgery in the past 12 months, Diagnosed cases of serious pathologies like infection, inflammation or malignancy

Intervention groups
Experimental Group (Group A): This group will be same as control group (as in having conventional physical therapy) but with addition of the intervention which will be muscle energy techniques (MET). Therapist will give resistance to produce isometric contraction in the muscles just short of the barrier. The patient strength of muscle contraction will be less than the therapist counter force of resistance. Therapist will hold the position for 7-10 seconds. Then a 30 seconds stretch will be given and the process will be repeated three times. Control Group (Group B): This group will comprise of conventional therapy for the participants. Conventional therapy will include heating pad for 15-20 minutes and soft tissue release for 5 minutes.

Main outcome variables
Outcome will be measured on the basis of means of NPRS score and neck ROMs.

General information

Reason for update

Acronym
MET

IRCT registration information
IRCT registration number: **IRCT20220209053976N1**
Registration date: **2022-02-14, 1400/11/25**
Registration timing: **prospective**

Last update: **2022-02-14, 1400/11/25**
Update count: **0**

Registration date
2022-02-14, 1400/11/25

Registrant information

Name
Ghulam Hussain

Name of organization / entity
Khyber Medical University

Country
Pakistan

Phone
+92 341 3219734

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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date

2022-03-01, 1400/12/10

Expected recruitment end date
2022-08-01, 1401/05/10

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
Immediate effects of muscle energy techniques and conventional physical therapy versus conventional physical therapy alone on pain and range of motion in patients with chronic mechanical neck pain: A randomized controlled trial

Public title
A manual therapy technique used in physiotherapy to decrease pain and increase range of motion in chronic mechanical neck pain

Purpose
Treatment

Inclusion/Exclusion criteria

Inclusion criteria:
Male and female Age 18-50 years Subjects having neck pain from previous 3 or more than 3 months

Exclusion criteria:
Cervical radiculopathy or disc prolapse Absolute contraindications for MET include trauma, bone fractures, joint dislocation or cervical instability Absolute contraindications for hot pack include dermatitis, abnormal sensations, active bleeding and open wounds History of the neck surgery in the past 12 months Diagnosed cases of serious pathologies like infection, inflammation or malignancy

Age
From **18 years** old to **50 years** old

Gender
Both

Phase
N/A

Groups that have been masked

- Outcome assessor

Sample size
Target sample size: **50**

Randomization (investigator's opinion)
Randomized

Randomization description
After participants are selected, they will be randomly allocated to control group and experimental group using lottery method in which they will be asked to select a piece of paper from a box. The piece of paper will be marked with initial of the groups (such as A or B) and then the participants will be allocated to the group initial that was on paper.

Blinding (investigator's opinion)
Single blinded

Blinding description
Due to nature of study, it will not be feasible to blind researcher/therapist and subjects. However, assessor, who will assess pre and post scores, will be blind.

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
KMU ethics committee

Street address
F1 Phase-6 Rd, Phase 5 Hayatabad

City
Peshawar

Postal code
25000 (25100)

Approval date
2022-02-25, 1400/12/06

Ethics committee reference number
not yet provided

Health conditions studied

1

Description of health condition studied
Chronic mechanical neck pain

ICD-10 code
M54.2

ICD-10 code description
Cervicalgia

Primary outcomes

1

Description
Cervical pain and range of motion

Timepoint
before intervention and immediately post intervention

Method of measurement
Pain will be measured using numerical pain rating scale and range of motion by goniometer

Secondary outcomes

empty

Intervention groups

1

Description
Experimental/Interventional Group (Group A): This group

will be same as control group (as in having conventional physical therapy) but with addition of the intervention which will be muscle energy techniques (MET). Therapist will give resistance to produce isometric contraction in the muscles just short of the barrier. The patient strength of muscle contraction will be less than the therapist counter force of resistance. Therapist will hold the position for 7-10 seconds. Then a 30 seconds stretch will be given and the process will be repeated three times.

Category
Rehabilitation

2

Description
Control group B: This group will comprise of conventional therapy for the participants. Conventional therapy will include heating pad for 15-20 minutes and soft tissue release for 5 minutes.

Category
Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center
Physiotherapy department, Hayatabad medical complex, Peshawar khyber pakhtoonkhwa, Pakistan

Full name of responsible person
Dr. Zara PT

Street address
Phase 4 Hayatabad, Peshawar

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Pashto

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+92 313 9913036

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zara.kmu20@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Khyber medical university

Full name of responsible person
Dr. Aatik Arsh PT

Street address
F1 Phase-6 Rd, Phase 5 Hayatabad

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Peshawar

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25000 (25100)

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+92 344 6997046

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aatikarshkmu@yahoo.com

Grant name

Grant code / Reference number

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

Title of funding source
Khyber medical university

Proportion provided by this source
50

Public or private sector
Public

Domestic or foreign origin
Domestic

Category of foreign source of funding
empty

Country of origin

Type of organization providing the funding
Persons

Person responsible for general inquiries

Contact

Name of organization / entity
Khyber medical university

Full name of responsible person
Dr. Aatik Arsh PT

Position
Assistant professor

Latest degree
Master

Other areas of specialty/work
Physiotherapy

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Person responsible for scientific inquiries

Contact

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Person responsible for updating data

Contact

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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

No - There is not 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

I will provide study protocols, data analysis, codes

When the data will become available and for how long

After completion of my thesis and will provide for long time

To whom data/document is available

To IRCT and other members

Under which criteria data/document could be used

For research and educational purposes

From where data/document is obtainable

from websites and journals

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

online

Comments