

Clinical Trial Protocol

Iranian Registry of Clinical Trials

13 Jul 2026

COMPARING THE EFFECT OF MUSCLE ENERGY TECHNIQUE AND MULLIGAN MOBILIZATION WITH MOVEMENT ON PAIN, RANGE OF MOTION AND DISABILITY IN ADHESIVE CAPSULITIS

Protocol summary

Study aim

To compare the effect of Mulligan's mobilization with movement and Muscle energy technique to decrease pain, disability and increase ROM in patients of adhesive capsulitis.

Design

Parallel group, single blinded, randomized controlled trial

Settings and conduct

OPD Physiotherapy department Mayo Hospital, Lahore.

Participants/Inclusion and exclusion criteria

Inclusion Criteria □ Subject having stage 2 of frozen shoulder □ Age group 30-70years □ Subject with bilateral/unilateral adhesive capsulitis □ Both males and females □ Subject who willing to participate Exclusion Criteria: □ Malignancy □ Patients was excluded if they exhibited □ Subjects with Neuromuscular disorders □ Conditions that contraindicated to manual therapy. □ Any participant who was unable to return for follow up treatment or evaluation. □ Any participant who received treatment concurrent to the research.

Intervention groups

All the participant who came to physiotherapy department was considered and screened for adhesive capsulitis stage 2 with having a restriction of movements. 70 patients were allotted in two groups i.e.; group A(MWM) and group B(MET) via lottery method, 35 in each group. Consider the inclusion and exclusion criteria before concerning them in study. Both groups were received the conventional therapy, which was remain same throughout the study. Patient in A group was treated with Mulligan's mobilization and in B group with muscle energy technique. Dosage:- Totally, 6 repetitions of the technique were performed during a single treatment session. The period between each repetition was no longer than 60s. □ Duration: - Three session/week (alternative days) and treatment last for 3 weeks.

Main outcome variables

- assessing the intensity of pain via using Numeric pain scale
- range of motion was measure by Goniometer
- and functional disability was measured by SPADI tool

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20200611047734N2**

Registration date: **2020-06-22, 1399/04/02**

Registration timing: **retrospective**

Last update: **2020-06-22, 1399/04/02**

Update count: **0**

Registration date

2020-06-22, 1399/04/02

Registrant information

Name

AYESHA RAZZAQ

Name of organization / entity

King Edward Medical University, Lahore

Country

Pakistan

Phone

+92 61 6521475

Email address

drayesharazzak@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2018-06-11, 1397/03/21

Expected recruitment end date

2018-12-11, 1397/09/20

Actual recruitment start date

2018-09-10, 1397/06/19

Actual recruitment end date

2019-03-10, 1397/12/19

Trial completion date

2019-03-10, 1397/12/19

Scientific title

COMPARING THE EFFECT OF MUSCLE ENERGY
TECHNIQUE AND MULLIGAN MOBILIZATION WITH
MOVEMENT ON PAIN, RANGE OF MOTION AND DISABILITY
IN ADHESIVE CAPSULITIS

Public title

COMPARING THE EFFECT OF MUSCLE ENERGY
TECHNIQUE AND MULLIGAN MOBILIZATION WITH
MOVEMENT ON PAIN, RANGE OF MOTION AND DISABILITY
IN ADHESIVE CAPSULITIS

Purpose

Treatment

Inclusion/Exclusion criteria**Inclusion criteria:**

□ Subject having stage 2 of frozen shoulder □ Age group
30-70years □ Subject with bilateral/unilateral adhesive
capsulitis □ Both males and females □ Subject who willing
to participate

Exclusion criteria:

□ Malignancy □ Patients was excluded if they exhibited □
Subjects with Neuromuscular disorders □ Conditions that
contraindicated to manual therapy. □ Any participant who
was unable to return for follow up treatment or
evaluation. □ Any participant who received treatment
concurrent to the research.

AgeFrom **30 years** old to **70 years** old**Gender**

Both

Phase

N/A

Groups that have been masked

- Participant

Sample sizeTarget sample size: **70**

More than 1 sample in each individual

Number of samples in each individual: **35**

35 patients in each group was estimated by using 5%
level of significance, 90% power of test

Actual sample size reached: **70**

More than 1 sample in each individual

Actual sample size in each individual: **35**

35 patients in each group was estimated by using 5%
level of significance, 90% power of test

Randomization (investigator's opinion)

Randomized

Randomization description

it was a single blinded randomized control trial. in which
participant were kept blind. All the participant who came
to physiotherapy department was considered and
screened for adhesive capsulitis stage 2 with having a
restriction of movements. 70 patients were allotted in
two groups i.e.; group A(MWM) and group B(MET) via

lottery method, 35 in each group. Consider the inclusion
and exclusion criteria before concerning them in study.
Informed consent was taken whether they were willing to
participate or not in written form.

Blinding (investigator's opinion)

Single blinded

Blinding description

it was a single blinded study in which participant/
patients were kept blind for treatment technique. 2
different technique were provided to patients. and they
were blind about that which technique was given to
which patients.

Placebo

Not used

Assignment

Parallel

Other design features

Parallel groups, single blinded, single setting

Secondary Ids

empty

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

Institutional Review Board

Street address

Neela Gumbad, New Anarkali, Lahore

City

Lahore

Postal code

36121

Approval date

2018-06-11, 1397/03/21

Ethics committee reference number

407/RC/KEMU

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

adhesive Capsulitis stage 2

ICD-10 code

M75

ICD-10 code description

Shoulder lesions

Primary outcomes**1****Description**

pain

Timepoint

Baseline and after 3rd week

Method of measurement

Numeric Pain Rating Scale

2

Description

Range of motion

Timepoint

baseline and after 3rd week

Method of measurement

Goniometer

3

Description

functional Disability

Timepoint

baseline and after 3rd week

Method of measurement

SPADI Tool

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: Patient in A group was treated with Mulligan's mobilization. Both groups were received the conventional therapy, which was remain same throughout the study. The conventional therapy includes hot pack for 10 minutes and shoulder exercises which include wand exercise, pulley rope, shoulder wheel exercise and wall climbing exercises. Group A: - Application of hot pack, exercises and mulligan's mobilization. □ Dosage: - The glide was applied and sustained for approximately 5-10 s while the patient performed the pain-free gripping action. Totally, 6 repetitions of the technique were performed during a single treatment session. The period between each repetition was no longer than 60s. □ Duration: - Three session/week (alternative days) and treatment last for 3 weeks

Category

Treatment - Devices

2

Description

Intervention group: Patient in B group was treated with muscle energy technique. Both groups were received the conventional therapy, which was remain same throughout the study. The conventional therapy includes hot pack for 10 minutes and shoulder exercises which include wand exercise, pulley rope, shoulder wheel exercise and wall climbing exercises. □ Dosage: - Hold the position for 8-10 and relax for 3-4 sec than gain new range. Totally, 6 repetitions of the technique were performed during a single treatment session. The period between each repetition was no longer than 60s. □ Duration: 3 weeks with 3 sessions per weeks.

Category

Treatment - Devices

Recruitment centers

1

Recruitment center

Name of recruitment center

OPD Physiotherapy department Mayo Hospital, Lahore.

Full name of responsible person

AYESHA RAZZAQ

Street address

sahar villa, opposite to multan public boys school road multan

City

Multan

Postal code

66000

Phone

+92 61 6521475

Email

drayesharazzak@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

king edward medical university, Lahore

Full name of responsible person

RANA DILAWAAIZ NADEEM

Street address

Neela Gumbadh, New Anarkali, Lahore

City

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Phone

+92 42 99214819

Email

rdnadeem@yahoo.com

Grant name

ayesha razzaq

Grant code / Reference number

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

No

Title of funding source

academic support only

Proportion provided by this source

20

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

Academic

Person responsible for general inquiries

Contact

Name of organization / entity

king edward medical university,Lahore

Full name of responsible person

ayesha razzaq

Position

senior Lecturer/Senior Physiotherapist

Latest degree

Medical doctor

Other areas of specialty/work

Physiotherapy

Street address

sahar villa, boys multan public school road,Multan

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multan

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Person responsible for scientific inquiries

Contact

Name of organization / entity

king edward Medical University,Lahore

Full name of responsible person

Rana Dilawaaiz Nadeem

Position

professor/ head of department orthopedic king edward medical university/Mayo hospital.

Latest degree

Specialist

Other areas of specialty/work

Orthopedics

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Person responsible for updating data

Contact

Name of organization / entity

king edward medical universsity

Full name of responsible person

ayesha razzaq

Position

senior lecturer/ senior physiotherapist

Latest degree

Master

Other areas of specialty/work

Physiotherapy

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shar villa, boys multan public school road,Multan

City

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66000

Phone

+92 61 6521475

Email

drayesharazzak@gmail.com

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

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

Undecided - It is not yet known if there will be a plan to make this available

Title and more details about the data/document

COMPARING THE EFFECT OF MUSCLE ENERGY TECHNIQUE AND MULLIGAN MOBILIZATION WITH MOVEMENT ON PAIN, RANGE OF MOTION AND DISABILTIV IN ADHESIVE CAPSULITIS

When the data will become available and for how long

study is completed and become available after its publication

To whom data/document is available

person in academic institute. Patient data will not be shown .

Under which criteria data/document could be used

under the usage with terms in which journal is accessed /processed for publication it could be used in request.

From where data/document is obtainable

+923367595206 from the University office and Responsible supervisor and from journal we will process in future

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

can be on call or mail It will be only used in confidential way for improving research and benefit of humanity

Comments

data can bee provided on request