

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Effectiveness of muscle energy technique and posterior shoulder mobilization with movement in patients with subacromial pain syndrome

Protocol summary

Study aim

To evaluate the comparative effectiveness of muscle energy technique and posterior shoulder mobilization with movement for symptoms severity in patients with shoulder pain syndrome.

Design

Pragmatic parallel, double blinded, randomized clinical trial. The sample of 40 patients will be randomized through online random number table in 2 groups (20 patients/ group)

Settings and conduct

Data will be collected from Department of Physical Therapy, Bkhtawar Amin Trust and Teaching Hospital, Multan, Pakistan.

Participants/Inclusion and exclusion criteria

Inclusion Criteria: Patients diagnosed with unilateral subacromial pain for minimum of 3 months. Painful arc in shoulder abduction range 70° -120°, Positive shoulder abduction stress test, At least three positive physical tests from followings Neer impingement test, Hawkins kneddy test, Drop arm test, relocation test and apprehension test. Pain aggravates upon resisted muscle testing in abduction and lateral rotation. Exclusion Criteria: Patients potentially not willing to participate in study, Patients with recent history of fall fracture and shoulder surgery, Degenerative joint disease or dislocation of affected shoulder, Cervical radiculopathies, Frozen shoulder, Bursitis, Associated systemic diseases

Intervention groups

Group 1: Muscle Energy Technique; Post isometric muscle relaxation technique of METs will be used to improve outcome measures in patients with subacromial pain syndrome. Group 2: Posterior shoulder mobilization with movement; Mulligan concept of mobilization with movement will be used to address symptoms severity

Main outcome variables

Shoulder pain severity; shoulder physical disability; shoulder range of motion

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20190904044693N1**

Registration date: **2022-08-06, 1401/05/15**

Registration timing: **retrospective**

Last update: **2022-08-06, 1401/05/15**

Update count: **0**

Registration date

2022-08-06, 1401/05/15

Registrant information

Name

Shahid Ishaq

Name of organization / entity

University of Lahore

Country

Pakistan

Phone

+92 42 32300876

Email address

shahidishaq53@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2022-04-22, 1401/02/02

Expected recruitment end date

2022-06-03, 1401/03/13

Actual recruitment start date

2022-05-09, 1401/02/19

Actual recruitment end date

2022-06-01, 1401/03/11

Trial completion date

2022-09-16, 1401/06/25

Scientific title

Effectiveness of muscle energy technique and posterior shoulder mobilization with movement in patients with subacromial pain syndrome

Public title

Effectiveness of muscle energy technique and posterior shoulder mobilization with movement in patients with subacromial pain syndrome

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Patient diagnosed with subacromial pain syndrome by orthopedic surgeon History of unilateral subacromial pain for minimum of 3 months Painful arc in shoulder abduction range 70° -120° Pain aggravates upon resisted muscle testing in abduction and lateral rotation At least three positive physical tests from followings Neer impingement test, Hawkins kneddy test, Drop arm test, relocation test Positive shoulder abduction stress test

Exclusion criteria:

Patients potentially not willing to participate in study Patients with recent history of fall, upper limb fracture and shoulder surgery Degenerative joint disease of affected shoulder Cervical radiculopathy Frozen shoulder shoulder bursitis Associated systemic disease

Age

From **30 years** old to **60 years** old

Gender

Both

Phase

N/A

Groups that have been masked

- Outcome assessor
- Data analyser

Sample size

Target sample size: **56**

More than 1 sample in each individual

Number of samples in each individual: **28**

twenty eight in each group

Actual sample size reached: **40**

More than 1 sample in each individual

Actual sample size in each individual: **20**

Twenty in each group

Randomization (investigator's opinion)

Randomized

Randomization description

The 56 patients diagnosed with shoulder pain syndrome referred by the orthopedic surgeons will be screened for eligibility. The 40 patients meeting the eligibility criteria will be randomized into two equal groups. The patients will be randomly allocated (20/group) through online computer generated random number table. Every subject will be assigned a random number from the table on recruitment. Online table will be generated by using this site:

<https://www.random.org/sequences/?mode=advanced>

Smallest value: 1 Largest value: 40 The format in

Column: 2 The sequence of numbers 20 will be randomly allocated in column 1, and 20 will be allocated in column

2

Blinding (investigator's opinion)

Double blinded

Blinding description

The outcome assessor will be the consultant physical therapist of setting department of physical therapy, Bakhtawar Amin Trust and Teaching Hospital, Multan. Outcomes will be measured at baseline before starting treatment and end of treatment after 6 week. Outcome assessor will be unaware about treatment given to any particular subject. Data will be analysed by statistician without knowing the treatment regime received both groups

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Research ethics committee of Muhammad Institute of Medical and Allied Sciences

Street address

HBL Street, Near Sabzazar Metro Station, Bosan Raod Multan

City

Multan

Postal code

60700

Approval date

2022-04-10, 1401/01/21

Ethics committee reference number

MIMAS/107/IRB/Shahid/5/DPT

Health conditions studied

1

Description of health condition studied

Subacromial Pain Syndrome

ICD-10 code

ICD-10 code description

Subacromial Pain Disease

Primary outcomes

1

Description

Shoulder pain severity

Timepoint

Before and after 6 week successful completion of follow ups

Method of measurement

Numeric Pain Rating Scale (NPRS)

2

Description

Shoulder physical disability

Timepoint

Before and after 6 week successful completion of follow ups

Method of measurement

Shoulder pain and Disability Index (SPADI)

3

Description

Shoulder range of motion (ROM)

Timepoint

Before and after 6 week successful completion of follow ups

Method of measurement

Universal goniometer

Secondary outcomes

empty

Intervention groups

1

Description

Muscle Energy Technique: Post isometric muscle relaxation technique of METs will be used to improve outcome measures in patients with subacromial pain syndrome. Patient will be in supine lying position and will be asked for 7-10 seconds sustained contraction of muscle against the therapist hold by using 20-30% force of body. Then therapist will move the limb passively in shoulder range until new barrier will be found and same procedure will be repeated to eliminate the barrier. Patients will be treated on alternative days for 6 weeks.

Category

Rehabilitation

2

Description

Posterior shoulder mobilization with movement: One hand of the physical therapist stabilizes the patients shoulder girdle. While other hand will perform a posterior-lateral glide of the humeral head. Patients will be asked to raise the affected arm to find the new point of pain onset and therapist will sustain the gliding force. The therapist will maintain the gliding at right angle of movement throughout the entire active range performed by patients. The entire procedure of mobilization will be pain free and patients will be instructed to report any pain and discomfort.

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Department of Physical Therapy, Bakhtawar Amin Trust and Teaching Hospital, Multan

Full name of responsible person

Shahid Ishaq

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Web page address

<https://www.trust.bamdc.edu.pk/>

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Muhammad Institute of Medical and Allied Sciences, Multan

Full name of responsible person

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Grant name

Grant code / Reference number

No

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

No

Title of funding source

Nil

Proportion provided by this source

10

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
Bakhtawar Amin College of Rehabilitation Sciences
Full name of responsible person
Shahid Ishaq
Position
Senior Lecturer
Latest degree
Master
Other areas of specialty/work
Rehabilitation management
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Person responsible for scientific inquiries

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Person responsible for updating data

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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

No - There is not 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

Effectiveness of muscle energy technique and posterior shoulder mobilization with movement in patients with subacromial pain syndrome

When the data will become available and for how long

The data will be available after publication of this research study

To whom data/document is available

Data document will be available to corresponding author

Under which criteria data/document could be used

Data could be used only for research purpose

From where data/document is obtainable

Data will be obtainable on request to corresponding author

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

Through email to shahidishaq53@gmail.com

Comments