

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Effectiveness of Upper Thoracic Sustained Stretch Mobilization and Posterior Shoulder Stretch Glide for Subacromial Impingement Syndrome

Protocol summary

Study aim

The aim of this study was to evaluate the comparative effectiveness of upper thoracic sustained stretch mobilization and posterior shoulder stretch glide for management of SIS symptoms severity such as shoulder pain, disability, range of motion and thoracic kyphosis angle.

Design

A double blinded randomized clinical trial

Settings and conduct

a study conducted at; Bakhtawar Amin Trust and Hospital Multan Faiz hospital Multan Outcome assessor and data analyzer will be unaware of intervention received by particular subject/ group

Participants/Inclusion and exclusion criteria

Inclusion criteria: (1) Potentially willing patients diagnosed with subacromial impingement syndrome (SIS) (2) Both male and female, of age 25-45 years (3) Patients with thoracic kyphosis $>40^\circ$ (4) At least three positive physical tests from followings Neer impingement test, Hawkins kneddy test, Drop arm test, relocation test and apprehension test will be included. (5) Patients often had painful arc between 70° and 120° pain on forced movement above the head. Exclusion criteria: Patients with following conditions will be excluded (1) History of rotator cuff tear, shoulder and cervicothoracic surgery. (2) Patients of scapulothoracic dysfunction, sensory/ motor deficit and adhesive capsulitis. (3) Osteoporosis, fracture and dislocation.(4) Presence of thoracic scoliosis on Adam's forward bend test.

Intervention groups

Group A- Upper thoracic (T1-T4) centrally posterior-anterior sustained stretch mobilization Group B- Posterior shoulder sustained stretch glide

Main outcome variables

shoulder pain, physical disability, range of motion and thoracic kyphosis angle are outcome measures.

General information

Reason for update

Acronym

UTSSM

IRCT registration information

IRCT registration number: **IRCT20220712055441N1**

Registration date: **2022-07-15, 1401/04/24**

Registration timing: **retrospective**

Last update: **2022-07-15, 1401/04/24**

Update count: **0**

Registration date

2022-07-15, 1401/04/24

Registrant information

Name

Shahid Ishaq

Name of organization / entity

Muhammad Institute of Medical and Allied Sciences,
Multan

Country

Pakistan

Phone

+92 305 2032722

Email address

shahidishaq@mimas.edu.pk

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2022-01-08, 1400/10/18

Expected recruitment end date

2022-01-28, 1400/11/08

Actual recruitment start date

2022-01-16, 1400/10/26

Actual recruitment end date

2022-02-05, 1400/11/16

Trial completion date

2022-08-06, 1401/05/15

Scientific title

Effectiveness of Upper Thoracic Sustained Stretch Mobilization and Posterior Shoulder Stretch Glide for Subacromial Impingement Syndrome

Public title

Upper Thoracic and Posterior Shoulder sustained Stretch Glide

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Both male and female, of age 25-45 years Patients with thoracic kyphosis >40° Patients with at least three positive physical tests from followings Neer impingement test, Hawkins kneddy test, Drop arm test, relocation test and apprehension test will be included. Patients often have painful arc between 70° and 120° pain on forced movement above the head

Exclusion criteria:

History of rotator cuff tear, shoulder and cervicothoracic surgery Patients of scapulothoracic dysfunction, sensory/motor deficit and adhesive capsulitis Osteoporosis Surgery Fractures Dislocations Presence of thoracic scoliosis on Adam's forward bend test

Age

From **25 years** old to **45 years** old

Gender

Both

Phase

2-3

Groups that have been masked

- Outcome assessor
- Data analyser

Sample size

Target sample size: **46**

More than 1 sample in each individual

Number of samples in each individual: **23**

Twenty Three patients per group

Actual sample size reached: **40**

More than 1 sample in each individual

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

Twenty patients per group

Randomization (investigator's opinion)

Randomized

Randomization description

The patients diagnosed with subacromial impingement syndrome (SIS) (n=46) referred by orthopedic surgeon will be screened for eligibility. The patients (n=40) meet the eligibility criteria will be randomly allocated in two equal groups (n=20) in each group through online computer generated random number table. Every participant will be assigned a random number after written informed consent.

Blinding (investigator's opinion)

Double blinded

Blinding description

In this double-blinded study, outcomes will be measured at baseline and after completing 4 weeks successful

followup by senior physical therapist with out knowing treatment regimen given to that particular patient. Data will be analyzed by statistician without knowing the intervention given to any particular group.

Placebo

Not used

Assignment

Parallel

Other design features

thoracic kyphosis will be measured by using an inclinometer shoulder ROM will be measured by a universal goniometer, pain intensity will be measure by NPRS, shoulder disability will be measured by shoulder pain and disability index

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Research ethics committee of Muhammad Intitute of Medical and Allied Sciences

Street address

HBL street Near Sabza Zar Metro Station, Bosan Road Multan

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Multan

Postal code

60700

Approval date

2021-12-18, 1400/09/27

Ethics committee reference number

MIMAS/75/IBR/Shahid

Health conditions studied

1

Description of health condition studied

subacromial impingement syndrome

ICD-10 code

M75.4

ICD-10 code description

Impingement syndrome of shoulder

Primary outcomes

1

Description

Shouder Physical Disability

Timepoint

Evaluated before and after treatment

Method of measurement

Shoulder pain and disability index (SPADI)

2

Description

Shoulder pain intensity,

Timepoint

evaluated before and after treatment

Method of measurement

Numeric pain rating scale (NPRS),

3

Description

shoulder range of motion

Timepoint

evaluated before and after treatment

Method of measurement

Universal goniometer

Secondary outcomes

1

Description

Thoracic Kyphosis Angle

Timepoint

evaluated before and after treatment protocol

Method of measurement

sagittal plane radiograph in weight bearing position and arm folded 45o

Intervention groups

1

Description

Group A will receive upper thoracic (T1-T4) centrally postero-anterior sustained stretch mobilization. The patient was in prone and a small pillow was placed under the chest. Therapist applied central posterior-anterior (CPA) mobilization force with straight arm by using body as mobilizing force. The mobilization was given beyond transition zone for grade 3 stretching of joint capsule and soft tissue. Each stretch was sustained for 30-40 second and repeated in cyclic manner for 3 time per session. This mobilization treatment was applied parallel to routine physical therapy. All patients will be treated parallelly 3 time a week for 4 weeks.

Category

Treatment - Other

2

Description

Group B will posterior shoulder sustained stretch glide. The patient will be in supine laying near the edge of treatment table. The therapist will distract the joint in open pack position and apply grade 3 stretch glide to posterior shoulder capsule. Each stretch will be sustained for 30-40 second. The treatment will be cyclically repeated for 3 time per session. All patients will be treated parallelly 3 time a week for 4 weeks.

Category

Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center

department of physical therapy of Bakhtawar trust and teaching hospital

Full name of responsible person

Shahid Ishaq

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Mattital Road, Northern Bypass, Multan,

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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

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

Muhammad Institute of Medical and Allied Science

Full name of responsible person

Shahid Ishaq

Position

Senior Lecturer

Latest degree

Master

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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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

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

Title: Effectiveness of Upper thoracic sustained stretch mobilization and Posterior shoulder stretch glide for Subacromial Impingement Syndrome Purpose: to evaluate the comparative effectiveness of upper thoracic sustained stretch mobilization and posterior shoulder stretch glide for management of SIS symptoms severity such as shoulder pain, disability, range of motion and thoracic kyphosis angle.

When the data will become available and for how long

this is expected that this study or data will be available at the end of the year. no exact date can be expected

To whom data/document is available

Shahid Ishaq

Under which criteria data/document could be used

For research purposes

From where data/document is obtainable

<https://www.researchgate.net/>

<https://scholar.google.com/>

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

open access

Comments

This randomized clinical trial will explore the new dimensions of SIS treatment.