

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Effect of Mulligan Mobilization with Movement on Scapular Dyskinesia after Distal Radius Fracture; A Randomized Clinical Trial

Protocol summary

Study aim

To see the effectiveness of Mulligan mobilization with movement and corrective exercises and corrective exercises alone in scapular dyskinesia to evaluate level of disability of the affected limb after scapular winging.

Design

Pragmatic, parallel-group, single-blind, randomized clinical trial

Settings and conduct

The trial is conducted in Allied, District headquarters, and Aziz Fatima hospitals, Faisalabad. Subjects are chosen according to inclusion criteria. Subjects are blinded as they don't know their treatment protocol and group.

Participants/Inclusion and exclusion criteria

Inclusion criteria: Both male and female; aged 30-50 years; Patients diagnosed with distal radius fracture; Patients treated with closed reduction and plaster cast immobilization; Patients having distal radius fracture at least six weeks ago, after removal of the cast; Patients with scapular dyskinesia measured using lateral scapular slide test; Side to side difference of more than 1.5 cm considered significant. Exclusion criteria: Patients having complications after removal of the cast (e.g., compartment syndrome, Complex regional pain syndrome 1, carpal tunnel syndrome, wrist drop, neural or vascular issues, etc.); Patient having any shoulder pathology before fracture and after removal of the cast (e.g., shoulder pain, frozen shoulder, impingement syndrome, shoulder instability, bursitis, fracture, etc.); Patient having any radiculopathy or radiculitis; Patients having any neck problem (e.g., neck muscles spasm, wry neck, torticollis, etc.); Patient having any spine deformity (e.g., kyphosis, scoliosis, etc.).

Intervention groups

Intervention group: Mulligan Mobilization with Movement for positional faults. Maintain the glide and 8-10 reps of arm elevation were performed in 1 set. Control group: corrective exercise.

Main outcome variables

Distance of scapula from the spine.

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20210807052099N1**

Registration date: **2021-10-13, 1400/07/21**

Registration timing: **prospective**

Last update: **2021-10-13, 1400/07/21**

Update count: **0**

Registration date

2021-10-13, 1400/07/21

Registrant information

Name

Rida E Fatima

Name of organization / entity

The University of Faisalabad

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Pakistan

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Email address

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2021-07-05, 1400/04/14

Expected recruitment end date

2021-10-30, 1400/08/08

Actual recruitment start date

2021-10-31, 1400/08/09

Actual recruitment end date

2021-10-31, 1400/08/09

Trial completion date

2021-10-31, 1400/08/09

Scientific title

Effect of Mulligan Mobilization with Movement on Scapular Dyskinesia after Distal Radius Fracture; A Randomized Clinical Trial

Public title

Effect of Mulligan Mobilization with Movement on Scapular Dyskinesia after Distal Radius Fracture; A Randomized Clinical Trial

Purpose

Treatment

Inclusion/Exclusion criteria**Inclusion criteria:**

Both male and female aged 30-50years. Patients diagnosed with distal radius fracture. Patient treated with closed reduction and plaster immobilization. Patients having distal radius fracture at least 6weeks ago, after removal of cast. Patients with scapular dyskinesia measured using lateral scapular slide test. Side to side difference of more than 1.5cm considered significant.

Exclusion criteria:

Patients having complications after removal of cast (e.g. compartment syndrome, Complex regional pain syndrome 1, carpal tunnel syndrome, wrist drop, neural or vascular issues etc.). Patient having any shoulder pathology before fracture and after removal of cast (e.g. shoulder pain, frozen shoulder, impingement syndrome, shoulder instability, bursitis, fracture etc.). Patient having any radiculopathy or radiculitis. Patients having any neck problem e.g. neck muscles spasm, wry neck, torticollis etc. Patient having any spine deformity e.g. kyphosis, scoliosis etc. Patients who are medically unstable. Patients who are not willing to participate.

Age

From **30 years** old to **50 years** old

Gender

Both

Phase

N/A

Groups that have been masked

- Participant

Sample size

Target sample size: **52**

Actual sample size reached: **42**

Randomization (investigator's opinion)

Randomized

Randomization description

Lottery method was used for subject randomization in groups. Groups names were written on papers and were folded. After that subjects were asked to pick one paper. The groups were allotted to subjects and then treatment was started.

Blinding (investigator's opinion)

Single blinded

Blinding description

There was one treatment and one control group in this study. Groups were allocated to the subjects by the investigator after lottery method but subjects weren't

told which group they belong to. The measurements take from participants on questionnaires were also not shown to participants.

Placebo

Not used

Assignment

Parallel

Other design features**Secondary Ids**

empty

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

Ethics committee of The University of Faisalabad

Street address

Sargodha Rd, University Town, FSD

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Faisalabad

Postal code

38000

Approval date

2021-06-14, 1400/03/24

Ethics committee reference number

TUF/DR/MSPP/297

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

Scapular Dyskinesia

ICD-10 code

M89. 8X1

ICD-10 code description

Scapular dyskinesia is an alteration or deviation in the normal resting or active position of the scapula during shoulder movement. Also known as "SICK" Scapula Syndrome refers to Scapular malpositioning, inferior medial border prominence, coracoid pain a

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

Lateral Scapular Slide Test

Timepoint

Baseline reading before intervention and after 4 weeks of intervention as final reading.

Method of measurement

Scapular distance was measured using 8inch ruler from inferior angle of scapula to the adjacent vertebrae (T7/T8).

Secondary outcomes

1

Description

QuickDASH score.

Timepoint

Baseline reading before intervention and final reading was taken at 4th week after intervention.

Method of measurement

Disability score was calculated of each individual by the formula given on QuickDASH questionnaire.

Intervention groups

1

Description

Intervention group: Mulligan Mobilization with Movement.

Category

Other

2

Description

Control group: Corrective Exercises

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Allied Hospital.

Full name of responsible person

Rida-e-Fatima

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Recruitment center

Name of recruitment center

District Headquarters Hospital.

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Recruitment center

Name of recruitment center

Aziz Fatima Hospital

Full name of responsible person

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

The University of Faisalabad

Full name of responsible person

Dr. Sidra Majeed

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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

Self financed

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

Other

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Person responsible for general inquiries**Contact****Name of organization / entity**

The University of Faisalabad

Full name of responsible person

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Position

Student

Latest degree

Medical doctor

Other areas of specialty/work

Physiotherapy

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Sharing plan**Deidentified Individual Participant Data Set (IPD)**

Undecided - It is not yet known if there will be 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

Not applicable

Analytic Code

Not applicable

Data Dictionary

Not applicable