

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Comparison of Maitland Mobilization and Mulligan Mobilization with Movement in Knee Osteoarthritis Patients

Protocol summary

Study aim

To compare Maitland Mobilization and Mulligan Mobilization with Movement in Knee Osteoarthritis Patients.

Design

Interventional study Randomized control trial. Subjects were distributed to two groups with dice and roll method of randomization. Subjects of each group was assigned a number, after which numbers were selected at random.

Settings and conduct

Study conducted at Physiotherapy Department of Multan Institute of Kidney Diseases, Multan, Pakistan. Study was completed in 6 months. Sample size of 56 (28 in each group) within duration. Group 1 patients got Maitland mobilization treatment and Group 2 got Mulligan mobilization with movement treatment.

Participants/Inclusion and exclusion criteria

Inclusion criteria: Patients between ages 40-60 years. Patients with knee Osteoarthritis (diagnosed already) Patients with reduced knee Range Of Motion (greater than 10 degrees) due to pain in one or both knee joints. The Western Ontario and McMaster Universities Arthritis Index (WOMAC) score above 10. Chronic stages of knee pain Exclusion criteria: Patients having contraindication to mobilization. Recent fractures Patients having other major Musculoskeletal problems and having with red flag signs Patients with recent history of knee trauma Prolonged immobilization Any active inflammation in the knee joint.

Intervention groups

Group 1 patients got Maitland mobilization treatment and Group 2 got Mulligan mobilization with movement treatment.

Main outcome variables

Correcting knee osteoarthritis

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20191025045233N1**
Registration date: **2020-03-12, 1398/12/22**
Registration timing: **prospective**

Last update: **2020-03-12, 1398/12/22**

Update count: **0**

Registration date

2020-03-12, 1398/12/22

Registrant information

Name

Zeeshan Mehmood

Name of organization / entity

Riphah international university

Country

Pakistan

Phone

+92 66 2423919

Email address

zeeshanmehmood525@gmail.com

Recruitment status

Not yet recruiting

Funding source

Expected recruitment start date

2640-09-27, 2019/07/05

Expected recruitment end date

2640-11-28, 2019/09/07

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of Maitland Mobilization and Mulligan Mobilization with Movement in Knee Osteoarthritis

Patients

Public title

The Effect of Physical Therapy mobilization techniques in the management of knee osteoarthritis

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Patients between ages 40-60 years. Patients with reduced knee ROM (greater than 10 degrees) due to pain in one or both knee joints. Patients with knee Osteoarthritis (diagnosed already). Patients with reduced knee Range Of Motion (greater than 10 degrees) due to pain in one or both knee joints. WOMAC score above 10. The Western Ontario and McMaster Universities Arthritis Index (WOMAC) score above 10. Chronic stages of knee pain

Exclusion criteria:

Patients having contraindication to mobilization. Recent fractures Patients having other major musculoskeletal problems and having with red flag signs Patients with recent history of knee trauma Prolonged immobilization Any active inflammation in the knee joint.

Age

From **40 years** old to **60 years** old

Gender

Both

Phase

N/A

Groups that have been masked

- Participant
- Care provider
- Outcome assessor

Sample size

Target sample size: **56**

Randomization (investigator's opinion)

Randomized

Randomization description

The patients were randomly allocated into 2 groups to receive either the Maitland Mobilisation or Mulligan Mobilisation with movement by sealed envelope method. Patient will pick one sealed opaque envelope from the bowl and hand over it to clinicians who open it and give randomly generated treatment allocation within sealed opaque envelopes. Once a patient has consented to enter a trial an envelope is opened and the patient is then offered the allocated treatment

Blinding (investigator's opinion)

Single blinded

Blinding description

Patients were blinded as they do not know there respected group, therapist who gave treatment and assess the outcome was blinded

Placebo

Not used

Assignment

Parallel

Other design features

56 number of individuals divided into equal groups of 28 individual

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethic committee of Riphah college of Rehabilitation sciences

Street address

Street no 2 , Umer Farooq colony Muzaffargarh

City

Muzaffargarh

Postal code

34200

Approval date

2640-09-29, 2019/07/07

Ethics committee reference number

RCRS-RE-MS-OMPT/SPRING/19/023

Health conditions studied

1

Description of health condition studied

Osteoarthritis (OA) is a multifactorial degenerative joint problem, which is the most common cause of disability. (1, 2) It is the most occurring form of all arthritis types . It accounts for functional disability and pain in 19.2 -27.8% of people who are more than 45 years of age .About 37 % people have Knee OA after the age of 60 years diagnosed through knee radiographs. OA has no known cure. The management aims to decrease pain and improve the functional capacity and then the quality of life . The most common treatment options available are pharmacological and joint replacement surgeries. Surgery has a higher risk especially in old age population

ICD-10 code

M17.10

ICD-10 code description

Unilateral primary osteoarthritis, unspecified knee

Primary outcomes

1

Description

Correcting knee osteoarthritis

Timepoint

6 months

Method of measurement

Data collection tools

Secondary outcomes

1

Description

Correcting knee osteoarthritis

Timepoint

6 months

Method of measurement

Data collection tools

Intervention groups

1

Description

Control group: This group will receive Maitland Mobilization with movement. The patients of this group received Maitland Grade I and II mobilization for pain and Grade III mobilization for improving ROM

Category

Rehabilitation

2

Description

Intervention group: This group will receive Mulligan mobilization with movement. Patients in this group received Mulligan's mobilization with movement in flexion and extension

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

kidney centre multan

Full name of responsible person

Zeeshan Mehmood

Street address

Street no 2 , Umer Farooq colony Muzaffargarh

City

Muzaffargarh

Postal code

34200

Phone

+92 61 8048600

Email

zeeshanmehmood525@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Riphah International University(Lahore Campus)

Full name of responsible person

Zeeshan Mehmood

Street address

Street no 2 , Umer Farooq colony Muzaffargarh

City

Muzaffargarh

Postal code

34200

Phone

+92 61 8048600

Email

zeeshanmehmood525@gmail.com

Grant name

Grant code / Reference number

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

No

Title of funding source

self

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

Academic

Person responsible for general inquiries

Contact

Name of organization / entity

Riphah International University(Lahore Campus)

Full name of responsible person

Zeeshan Mehmood

Position

Student

Latest degree

Master

Other areas of specialty/work

Physiotherapy

Street address

Street no 2 , Umer Farooq colony Muzaffargarh

City

Muzaffargarh

Province

Punjab

Postal code

34200

Phone

+92 61 8048600

Email

zeeshanmehmood525@gmail.com

Person responsible for scientific inquiries

Contact

Name of organization / entity

Riphah International University(Lahore Campus)

Full name of responsible person

zeeshan Mehmood

Position

Student
Latest degree
Master
Other areas of specialty/work
Physiotherapy
Street address
Street no 2 , Umer Farooq colony , Muzaffargarh
City
Muzaffargarh
Province
Punjab
Postal code
34200
Phone
+92 61 2427224
Email
zeeshanmehmood525@gmail.com

Person responsible for updating data

Contact

Name of organization / entity
Riphah International University(Lahore Campus)
Full name of responsible person
Zeeshan Mehmood
Position
Student
Latest degree
Master
Other areas of specialty/work
Physiotherapy
Street address
Street no 2 , Umer Farooq colony Muzaffargarh
City
Muzaffargarh
Province
Punjab
Postal code

64200
Phone
+92 61 8048600
Email
zeeshanmehmood525@gmail.com

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

Not applicable

Data Dictionary

Yes - There is a plan to make this available

Title and more details about the data/document

Comparison of Maitland Mobilization and Mulligan Mobilization with Movement in Knee Osteoarthritis Patients

When the data will become available and for how long

within 2 months

To whom data/document is available

online

Under which criteria data/document could be used

E-mail

From where data/document is obtainable

kidney centre multan MIKD

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

email

Comments