Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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

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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