Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

"Effects of Maitland mobilization and mulligan medial/lateral glide mobilization in knee osteoarthritis."

Protocol summary

Study aim
To determine the effects of Maitland mobilization and Mulligan medial/lateral glide on pain intensity, knee ROM and functional performance in patients with knee osteoarthritis.

Design
Two groups, parallel group, double blinded, Randomized Controlled Trial.

Settings and conduct
Riphah College of Rehabilitation & Allied Health Sciences The way forward day care centre, Lahore

Participants/Inclusion and exclusion criteria
INCLUSION CRITERIA: Old adults (age above 60 years) Male and female Patients who met the American College of Rheumatology clinical criteria for knee osteoarthritis Radiological evidence of knee OA grades 0 , 1 and 2 as per Kellgren Lawrence grading system Pain intensity of at least 3 on Visual Analogue Scale (VAS) Willing to participate in research project EXCLUSION CRITERIA: Infection or inflammatory disorder History of surgery or trauma on knee Malignancy Systemic illness Rheumatoid Arthritis Fracture, any situation which is contraindicate mobilization Osteoporosis Current use of any medication or physiotherapy treatment Cognitive impairments

Intervention groups
Group A: Maitland mobilization with conventional physical therapy Group B: medial/lateral mulligan mobilization with conventional physical therapy

Main outcome variables
Pain, Range of motion (ROM), Functional disability NPRS, Goniometer, Modified Western Ontario and McMaster Universities Arthritis Index (WOMAC scale)

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20200619047835N1**
Registration date: **2020-08-24, 1399/06/03**
Registration timing: **registered_while_recruiting**

Last update: **2020-12-23, 1399/10/03**
Update count: **1**

Registration date
2020-08-24, 1399/06/03

Registrant information

Name
Junaid Walayat

Name of organization / entity
Riphah International University

Country
Pakistan

Phone
+92 68 3768660

Email address
junaidwalayat76@gmail.com

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2020-04-01, 1399/01/13

Expected recruitment end date
2020-09-30, 1399/07/09

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
"Effects of Maitland mobilization and mulligan medial/lateral glide mobilization in knee osteoarthritis."

Public title
"Effects of Maitland mobilization and mulligan

medial/lateral glide mobilization in knee osteoarthritis."

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Middle & old adults (age above 60 years) Male and female Patients who met the American College of Rheumatology clinical criteria for knee osteoarthritis Radiological evidence of knee OA grades 0, 1 and 2 as per Kellgren Lawrence grading system Pain intensity of at least 3 on Visual Analogue Scale (VAS) Willing to participate in research project

Exclusion criteria:

Infection or inflammatory disorder History of surgery or trauma on knee Malignancy Systemic illness Rheumatoid Arthritis Fracture, any situation which is contraindicate mobilization Osteoporosis Current use of any medication or physiotherapy treatment Cognitive impairments

Age

From **60 years** old

Gender

Both

Phase

N/A

Groups that have been masked

- Participant
- Outcome assessor

Sample size

Target sample size: **22**

Randomization (investigator's opinion)

Randomized

Randomization description

written conset form will be taken. after enrollment into study , patient will be allocated either group A or group B by lottery method. No. of chits will be equal to total sample size, odd numbers will be allocated to Group A and even number will be allocated to Group B. each patient will be requested to draw a chit from the box and after that patient will be recruited into either Group A or Group B

Blinding (investigator's opinion)

Double blinded

Blinding description

Assessor Blind: Data safety will be ensured by assigning Specific Identity numbers and all consent, readings forms will be placed in locker to blind Assessors Participant Blind : study participants are unaware of the group allocations in such a way equal time is given to each patient, session schedule for each patient is different. the patients does not know who is receiving which intervention.

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

secretary ethical review committee, Riphah College of Rehabilitation and Allied Health Sciences

Street address

28-M, Quaid-e-Azam Industrial Estate, Kot Lakhpat, Lahore.

City

Lahore

Postal code

54000

Approval date

2020-02-08, 1398/11/19

Ethics committee reference number

REC/RCRS/20/1038

Health conditions studied

1

Description of health condition studied

knee osteoarthritis

ICD-10 code

M17

ICD-10 code description

Osteoarthritis of knee

Primary outcomes

1

Description

Pain

Timepoint

Before treatment, during treatment at 3rd week and after treatment at 6th week, Follow up in 9th week

Method of measurement

The Numeric Pain Rating Scale (NPRS)

Secondary outcomes

1

Description

Range of motion ROM

Timepoint

Before treatment, during treatment at 3rd week and after treatment at 6th week, follow up in 9th week

Method of measurement

Goniometer

2

Description

Functional disability

Timepoint

Before treatment, during treatment at 3rd week and

after treatment at 6th week, follow up in 9th week

Method of measurement

Modified Western Ontario and McMasterUniversities Arthritis Index(WOMAC scale)

Intervention groups

1

Description

Intervention group A: Maitland mobilization with conventional physical therapy

Category

Other

2

Description

Intervention group B: medial/lateral mulligan mobilization with conventional physicaltherapy

Category

Other

Recruitment centers

1

Recruitment center

Name of recruitment center

The Way Forward Daycare centre for senior citizens

Full name of responsible person

Junaid Walayat

Street address

1370, 1 Sagar Rd, Saddar Town, Lahore, Punjab, Pakistan

City

Lahore

Postal code

54000

Phone

+92 68 5900545

Email

junaidwalayat76@gmail.com

Web page address

2

Recruitment center

Name of recruitment center

Khursheed Majeed Hospital, Lahore

Full name of responsible person

Junaid Walayat

Street address

Solang Road ghazaiabad lahore

City

Lahore

Postal code

54000

Phone

+92 68 5900545

Email

junaidwalayat76@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Riphah International University

Full name of responsible person

Muhammad Salman Bashir

Street address

28-M Quaid-e-Azam Industrial Estate, Kot Lakhpat, Lahore

City

Lahore

Postal code

54000

Phone

+92 42 35126110

Email

chistisalman@yahoo.com

Grant name

Educational

Grant code / Reference number

1033

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

Yes

Title of funding source

Riphah International University

Proportion provided by this source

15

Public or private sector

Public

Domestic or foreign origin

Domestic

Category of foreign source of funding

Sponsor: country of origin

Country of origin

Type of organization providing the funding

Academic

Person responsible for general inquiries

Contact

Name of organization / entity

Riphah International University

Full name of responsible person

Junaid Walayat

Position

student

Latest degree

Bachelor

Other areas of specialty/work

Physiotherapy

Street address

House no#301 Ali block Abassia town, Rahim Yar Khan

City

Rahim Yar Khan

Province

Punjab

Postal code

64200

Phone
+92 307 0273723

Email
junaidwalayat76@gmail.com

Person responsible for scientific inquiries

Contact

Name of organization / entity
Riphah International University

Full name of responsible person
Junaid Walayat

Position
student

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Other areas of specialty/work
Physiotherapy

Street address
House no#301 Ali block Abassia town, Rahim Yar Khan

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Rahim Yar Khan

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64200

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junaidwalayat76@gmail.com

Person responsible for updating data

Contact

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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
Undecided - It is not yet known if there will be a plan to make this available

Analytic Code
Undecided - It is not yet known if there will be a plan to make this available

Data Dictionary
Undecided - It is not yet known if there will be a plan to make this available