Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Evaluation of Therapeutic Potential of Curcumin With and Without Strengthening Exercises in improving Rheumatoid Arthritis

Protocol summary

Study aim

The objective of this study was to assess the synergistic effects of curcumin with and without strengthening exercises in rheumatoid arthritis patients.

Design

Pragmatic,community bases,parallel group,Double blinded,Randomised control trial. There were 100 patients were enrolled.Study was done form June-december 2021.Out of 100 patients 90 were selected.

Settings and conduct

Study was conducted at Muhammad Institute of Medical and Allied Sciences Multan after approval from institutional ethical comittee.

Participants/Inclusion and exclusion criteria

Inclusion criteria: Patients of all ages, diagnosed RA, of both gender, and patients with swelling in joints and pain. Exclusion criteria: Patients with vascular neoplasia, fibromyalgia, radiculopathy, neuropathy, tumor, joint fractures, and vestibular problems were excluded.

Intervention groups

Treatment group A was treated with Curcumin and strengthening exercises, and control group B was treated with Curcumin only. Dosage of 180 mg/day of Curcumin The strengthening exercises given to group A were upper extremity resistive exercises, resistive hand training with the medicine ball, elbow, and shoulder resistive training by dumbbells. Lower extremity resistive exercises i-e resistive knee training by pressing soft rollers and ankle weights—upper extremity theraband strengthening exercises and lower extremity theraband strengthening exercises.

Main outcome variables

By using WOMAC and NPRS,pain,stiffness and physical activities were measured.And at the end patient dependency and range of motion were also assessed.By using WOMAC and NPRS scale,pain stiffness and ADLs were the variables to be assessed. Morover,Xray finding were also done for the assessment.

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20220401054388N1**
Registration date: **2022-04-11, 1401/01/22**
Registration timing: **retrospective**

Last update: **2022-04-11, 1401/01/22**
Update count: **0**

Registration date

2022-04-11, 1401/01/22

Registrant information

Name

Maliha Khalid Khan

Name of organization / entity

Ali –Ul- Murtaza Department of Rehabilitation Science, Muhammad Institute

Country

Pakistan

Phone

+92 333 6120602

Email address

drmalihatareen@mimas.edu.pk

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2021-06-18, 1400/03/28

Expected recruitment end date

2022-12-18, 1401/09/27

Actual recruitment start date

2021-06-01, 1400/03/11

Actual recruitment end date

2021-12-01, 1400/09/10

Trial completion date

2021-12-29, 1400/10/08

Scientific title
Evaluation of Therapeutic Potential of Curcumin With and Without Strengthening Exercises in improving Rheumatoid Arthritis

Public title
Curcumin With and Without Strengthening Exercises in Rheumatoid Arthritis

Purpose
Treatment

Inclusion/Exclusion criteria

Inclusion criteria:
Patients of all ages Diagnosed RA Both gender Patients with swelling in joints and pain

Exclusion criteria:
Vascular neoplasia Fibromyalgia Radiculopathy Neuropathy, Tumor, joint fractures, and vestibular problems

Age
No age limit

Gender
Both

Phase
3

Groups that have been masked

- Investigator
- Data analyser

Sample size
Target sample size: **100**
Actual sample size reached: **84**

Randomization (investigator's opinion)
Randomized

Randomization description
Double blinded study i-e randomization of participants in groups by lottery method and statistical analysis without biasness

Blinding (investigator's opinion)
Double blinded

Blinding description
Investigator and data analyser

Placebo
Not used

Assignment
Other

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
the Institutional Ethical Committee of Muhammad Institute of Medical and Allied Sciences,

Street address
HBL Street near Sabsazar Metro Station

City
Multan

Postal code
66000

Approval date
2021-02-02, 1399/11/14

Ethics committee reference number
MIMAS/28/IBR/Maliha

Health conditions studied

1

Description of health condition studied
Rheumatoid Arthritis

ICD-10 code
M05

ICD-10 code description
Rheumatoid arthritis with rheumatoid factor

Primary outcomes

1

Description
Pain,stiffness,Physical activities and joint deformity

Timepoint
6 weeks

Method of measurement
WOMAC and NPRS scale+ Radiographica; findings

Secondary outcomes

1

Description
Increase independency+ decrease in inflammatory biomarkers+ Immunity booster

Timepoint
6 weeks

Method of measurement
WOMAC and NPRS scale+lab investigations

Intervention groups

1

Description
Intervention group:Treatment group A was treated with Curcumin and strengthening exercises, and control group B was treated with Curcumin only. Curcumin was purchased from Khalid Nutraceuticals (Pvt.) LTD, Multan, Pakistan. Dosage of 180 mg/day of Curcumin followed by EFSA recommendations was given to patients.The strengthening exercises given to group A were upper extremity resistive exercises, resistive hand training with the medicine ball, elbow, and shoulder resistive training by dumbbells. Lower extremity resistive exercises i-e resistive knee training by pressing soft rollers and ankle weights—upper extremity theraband strengthening exercises and lower extremity theraband strengthening exercises.The treatment regimen for group A was

distributed as 3 sessions per week; each session lasted for 45 minutes. There were total 18 sessions. And treatment duration was 6 weeks. And 180 mg/day orally Curcumin was given

Category

Other

2

Description

Control group: control group B was treated with Curcumin only.Curcumin was purchased from Khalid Nutraceuticals (Pvt.) LTD, Multan, Pakistan. Dosage of 180 mg/day of Curcumin followed by EFSA recommendations was given to patients.Treatment regimen was 6 weeks.

Category

Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Ali –Ul- Murtaza Department of Rehabilitation Science, Muhammad Institute

Full name of responsible person

Imran Ahmad Khan

Street address

HBL street Sabsazar Metro Station

City

Multan

Postal code

66000

Phone

+92 313 6827130

Email

imranahmadkhandurrani@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Ali –Ul- Murtaza Department of Rehabilitation Science, MIMAS

Full name of responsible person

Imran Ahmad Khan

Street address

Hbl street sabsazar metro station

City

Multan

Postal code

66000

Phone

+92 312 6827130

Email

DrMalihatareen@mimas.edu.pk

Grant name

Student fund

Grant code / Reference number

26082022

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

No

Title of funding source

Instititutional Funding policy

Proportion provided by this source

50

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

Ali –Ul- Murtaza Department of Rehabilitation Science,MIMAS

Full name of responsible person

Imran Ahmad Khan

Position

Assisstant Professor

Latest degree

Ph.D.

Other areas of specialty/work

Cardiovascular Pharmacology

Street address

Multan

City

Multan

Province

Punjab

Postal code

66000

Phone

+92 312 6827130

Email

imranahmadkhandurrani@gmail.com

Person responsible for scientific inquiries

Contact

Name of organization / entity

Ali –Ul- Murtaza Department of Rehabilitation Science,MIMAS

Full name of responsible person

Imran Ahmad Khan

Position

Assisstant Professor

Latest degree

Ph.D.

Other areas of specialty/work

Cardiovascular Pharmacology

Street address

Multan

City

Multan

Province

Punjab

Postal code

66000

Phone

+92 312 6827130

Email

imranahmadkhandurrani@gmail.com

Person responsible for updating data

Contact

Name of organization / entity

Ali –Ul- Murtaza Department of Rehabilitation Science, Muhammad Institute

Full name of responsible person

Maliha Khalid Khan

Position

Professor

Latest degree

Medical doctor

Other areas of specialty/work

Physiotherapy

Street address

142

City

Multan

Province

Punjab

Postal code

66000

Phone

+92 333 6120602

Fax

Email

DrMalihatareen@mimas.edu.pk

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

Yes - There is a plan to make this available

Informed Consent Form

Yes - There is 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

Title and more details about the data/document

There is no further information

When the data will become available and for how long

There is no further information

To whom data/document is available

There is no further information

Under which criteria data/document could be used

There is no further information

From where data/document is obtainable

There is no further information

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

There is no further information

Comments

There is no further information