

Clinical Trial Protocol

Iranian Registry of Clinical Trials

07 Jun 2026

Comparison of electroacupuncture and low level laser in the treatment of the knee joint osteoarthritis

Protocol summary

Summary

The knee is affected to osteoarthritis more than any other joints. Knee osteoarthritis causes pain, inflammation, quadriceps muscle atrophy and tightness of hamstring muscle. The aim of this study is comparing the effects of electroacupuncture and low level laser on knee osteoarthritis. This study is a double blind clinical trial because both of patient and assessor are not aware of kind of treatment methods but therapist is aware kind of treatment methods. Sixty patients will refer to clinic of Fattemeh physiotherapy in Rafsanjan. Assessor evaluates the patients based on inclusion criteria, then he divided them to random permuted blocks methods in 3 equal groups and refers to therapist. Three interventions of this study are electroacupuncture (acupuncture associated with electricity), low level laser (Gallium, Aluminum- Arsenide, 810 nm, 100mv) and Placebo. Intensity of pain, movement, inflammation and 6 minutes walking test of knee osteoarthritis assessed during 1st, 5th, 10th sessions and one month after end of treatment. Inclusion criteria are having 45-75 year, knee pain more than 3 months, ability of walking, osteophyte in knee, reduction of joint space, crepitation of knee movement, grade 2 and 3 osteoarthritis of the knee and primary osteoarthritis of the knee. Exclusion criteria are injection of corticosteroids during previous 1 month, fracture, dislocation and previous surgery of the knee, pregnancy, rheumatoid arthritis and sever knee osteoarthritis (grade 4).

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201606173220N7**

Registration date: **2016-09-21, 1395/06/31**

Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2016-09-21, 1395/06/31

Registrant information

Name

Dadollah Shahimoridi

Name of organization / entity

Rafsanjan University of Medical Sciences

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d_shahimoridi@rums.ac.ir

Recruitment status

Recruitment complete

Funding source

Rafsanjan University of Medical Sciences

Expected recruitment start date

2016-06-05, 1395/03/16

Expected recruitment end date

2017-04-05, 1396/01/16

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of electroacupuncture and low level laser in the treatment of the knee joint osteoarthritis

Public title

The effect of electroacupuncture and laser on knee osteoarthritis

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion: having 45-75 years, knee pain more than 3 months, ability of walking, osteophyte in knee, reduction of joint space, crepitation of knee movement, grade 2 and 3. osteoarthritis of the knee. Exclusion criteria are injection of corticosteroids during previous 1 month, fracture, dislocation and previous surgery of the knee, pregnancy, rheumatoid arthritis and sever knee osteoarthritis (grade 4).

Age

From **45 years** old to **75 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **60**

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Double blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

None

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

The ethics committee of Rafsanjan University of Medical sciences

Street address

Central Organization of Rafsanjan University of Medical Sciences, Emam Ali Blvd

City

Rafsanjan

Postal code

7717893591

Approval date

2016-07-20, 1395/04/30

Ethics committee reference number

IR.Rums.Rec.1395.61

Health conditions studied

1

Description of health condition studied

Knee osteoarthritis

ICD-10 code

M19.0

ICD-10 code description

Primary arthrosis of other joints

Primary outcomes

1

Description

Pain intensity at rest

Timepoint

1st, 5th, 10th session and 1 month after end of treatment

Method of measurement

By Visual Analogue Scale (VAS)

2

Description

Inflammation around knee joints

Timepoint

1st, 5th, 10th session and 1 month after end of treatment

Method of measurement

By meter (cm)

3

Description

Knee movements

Timepoint

1st, 5th, 10th session and 1 month after end of treatment

Method of measurement

By goniometer

4

Description

6 minutes walking test

Timepoint

1st, 5th, 10th session and 1 month after end of treatment

Method of measurement

By chronometer

Secondary outcomes

empty

Intervention groups

1

Description

First group will receive electroacupuncture (needle is inserted to acupuncture points of knee osteoarthritis , then electrical stimulation through simulator set, connect to patients body, Ying Di, KWD 808, made in china, 3Hz and 20 minutes).

Category

Rehabilitation

2

Description

Second group will receive low level laser (Ga Al As, 810nm, 100mv) 6j intensity and 10 minutes per session during 10 session on 10 acupuncture points of the knee joints).

Category

Rehabilitation

3

Description

Third group (placebo): the sets of electroacupuncture and laser are turn on but no radiation or electricity don't receive on knee osteoarthritis.

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Fattemieh Physiotherapy Clinic

Full name of responsible person

Dadollah Shahimoridi

Street address

Alley 17, Moalem street

City

Rafsanjan

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Rafsanjan University of Medical sciences

Full name of responsible person

Hamid Hekimi

Street address

Educational Assistant, Central Organization of Rafsanjan University of Medical Sciences, Emam Ali Blvd

City

Rafsanjan

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Rafsanjan University of Medical sciences

Proportion provided by this source

100

Public or private sector

empty

Domestic or foreign origin

empty

Category of foreign source of funding

empty

Country of origin

Type of organization providing the funding

empty

Person responsible for general inquiries

Contact

Name of organization / entity

Rafsanjan University of Medical sciences

Full name of responsible person

Dadollah Shahimoridi

Position

Instructor (Academic member)

Other areas of specialty/work

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

empty

Study Protocol

empty

Statistical Analysis Plan

empty

Informed Consent Form

empty

Clinical Study Report

empty

Analytic Code

empty

Data Dictionary

empty