Clinical Trial Protocol
Iranian Registry of Clinical Trials

07 Nov 2026

Comparison of electroacupancture 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 Fattemieh 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
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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 electroacupancture 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
Centeral Organization of Rafsanjan University of Medical Sciences, Emam Ali Blvd
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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
Inflamation 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 goniameter

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
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Rafsanjan

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Rafsanjan University of Medical sciences
Full name of responsible person
Hamid Hekimi
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Educational Assistant, Central Organization of Rafsanjan University of Medical Sciences, Emam Ali Blvd
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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
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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