

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 2026

### Comparison of low power laser and %1 hydrocortisone phonophoresis in the treatment of Knee 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 muscles. The aim of this study is to compare the effects of low power laser and %1 hydrocortisone phonophoresis on knee osteoarthritis. This study is a double-blinded randomized clinical trial. 90 patients will refer to clinic of Fattemeh physiotherapy in Rafsanjan. They will be divided into three equal groups randomly. Three interventions of this study are low power laser (GaALAS,810nm, 100mv), %1 hydrocortisone phonophoresis (Ultrasound, ITO with %1 hydrocortisone ointment) and control (%1 hydrocortisone ointment). Intensity of pain, improvement of movement and reduction of inflammation are assessed during 1st, 5th and 10th sessions. Inclusion criteria are knee pain more than 3 months, osteophyte in knee joint, crepitation and reduction of joint space. Exclusion criteria are injection of corticosteroids during previous 1 month, fracture, dislocation and severe contracture of the knee joint.

#### General information

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT201107293220N2**

Registration date: **2011-09-21, 1390/06/30**

Registration timing: **registered\_while\_recruiting**

Last update:

Update count: **0**

##### Registration date

2011-09-21, 1390/06/30

##### Registrant information

##### Name

Dadollah Shahimoridi

##### Name of organization / entity

Rafsanjan University of Medical Sciences

##### Country

Iran (Islamic Republic of)

##### Phone

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##### Email address

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##### Recruitment status

**Recruitment complete**

##### Funding source

Rafsanjan University of Medical Sciences

##### Expected recruitment start date

2011-07-06, 1390/04/15

##### Expected recruitment end date

2012-05-04, 1391/02/15

##### Actual recruitment start date

empty

##### Actual recruitment end date

empty

##### Trial completion date

empty

##### Scientific title

Comparison of low power laser and %1 hydrocortisone phonophoresis in the treatment of Knee osteoarthritis

##### Public title

Comparison of laser and phonophoresis in the treatment of Knee osteoarthritis

##### Purpose

Treatment

##### Inclusion/Exclusion criteria

Inclusion: Knee pain more than 3 months; knee osteophyte; sclerosis under cartilage; decrease of joint space; crepitation. Exclusion: Corticosteroide injection during previous 1 month; fracture and dislocation of Knee; severe osteoarthritis of Knee; pregnancy; severe joint stiffness.

##### Age

From **30 years** old to **80 years** old

**Gender**

Both

**Phase**

N/A

**Groups that have been masked**

*No information*

**Sample size**

Target sample size: **90**

**Randomization (investigator's opinion)**

Randomized

**Randomization description**

**Blinding (investigator's opinion)**

Double blinded

**Blinding description**

**Placebo**

Not used

**Assignment**

Parallel

**Other design features**

**Secondary Ids**

empty

**Ethics committees**

**1**

**Ethics committee**

**Name of ethics committee**

Rafsanjan University of Medical Sciences

**Street address**

Emam Ali street

**City**

Rafsanjan

**Postal code**

7717893591

**Approval date**

2011-08-09, 1390/05/18

**Ethics committee reference number**

492/20/9

**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 and 10th sessions

**Method of measurement**

by Visual Analogue Scale (VAS)

**2**

**Description**

Inflammation around Knee joint

**Timepoint**

1st, 5th and 10th sessions

**Method of measurement**

By meter (cm)

**3**

**Description**

knee movements

**Timepoint**

1st, 5th and 10th sessions

**Method of measurement**

by Goniometer

**Secondary outcomes**

empty

**Intervention groups**

**1**

**Description**

First group will receive low power laser (GaALAS, 810 nm, 100mv) through 6J intensity and 5 minutes per session during 10 sessions on the knee joint (10 points)

**Category**

Rehabilitation

**2**

**Description**

Second group will receive %1 hydrocortisone phonophoresis by ultrasound (ITO, 7P, 1 MHZ, Japan) that is apply through 1/5 watt/cm2 intensity, continuous wave and 5 minutes per session plus %1 hydrocortisone ointment during 10 sessions on around knee joint.

**Category**

Rehabilitation

**3**

**Description**

Third group (control): %1 hydrocortisone ointment and jell massage around knee. Ultrasound and then laser is on but intensity (dose) of both sets are zero and apply on knee joint.

**Category**

Rehabilitation

**Recruitment centers**

**1**

**Recruitment center**

**Name of recruitment center**

Fattemeh physiotherapy clinic

**Full name of responsible person**

Dadollah Shahimoridi

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Moalem street, alley 17

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**Web page address****Person responsible for scientific inquiries****Contact****Name of organization / entity**

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**Web page address****Sponsors / Funding sources****1****Sponsor****Name of organization / entity**

Rafsanjan University of Medical Sciences

**Full name of responsible person**

Reza Vazerinejad

**Street address**

Emam Ali street

**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**

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**Web page address****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*