Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Effect of tele rehabilitation compared with rehabilitation at the clinic in patients with osteoarthritis of the knee

Protocol summary

Summary

Osteoarthritis is the most common disease of synovial joints and is a leading cause of disability in the elderly. In recent decades, many studies have been conducted on the treatment of non-pharmacological and physical therapy. Patients who live far away to attend the clinic regularly due to factors such as time and cost of transportation are an issue. We intended to compare the efficacy of telerehabilitation with office physiotherapy in terms of relief of symptoms and improvement of function in patients with knee osteoarthritis. Methods: In this randomized controlled study patients with osteoarthritis of the knee were enrolled. Those with radiological criteria of severe or grade 4 osteoarthritis were excluded. The patients were randomly assigned to two groups of telerehabilitation and office physiotherapy. In the first group, exercises were instructed to patients and they were told to continue this program for 6 weeks at home. During this period doctors supervised once a week by phone. In the second group, patients attended to physical therapy clinics 3 times a week for 6 weeks and were treated with passive physical therapy modalities.At baseline before the interventions, at 6 weeks, 1 and 6 months post rehab program KOOS and WOMAC questionnaires were completed by patients and the pain was evaluated according to VAS.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2017013032251N2**
Registration date: **2017-06-01, 1396/03/11**
Registration timing: **retrospective**

Last update:
Update count: **0**

Registration date

2017-06-01, 1396/03/11

Registrant information

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Kamran Azma
Name of organization / entity
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Recruitment status

Recruitment complete

Funding source

Artesh University of Medical Sciences

Expected recruitment start date

2016-08-22, 1395/06/01

Expected recruitment end date

2017-04-20, 1396/01/31

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of tele rehabilitation compared with rehabilitation at the clinic in patients with osteoarthritis of the knee

Public title

Knee osteoarthritis rehabilitation

Purpose

Treatment

Inclusion/Exclusion criteria

knee pain in the most of the days in the previous month, crepitation in active movements of the joints, morning stiffness less than 30 minutes, age between 45 to 60

years of old, swelling at the examination exclusion criteria: severe osteoarthritis according to Kellgren and Lawrence radiologic criteria

Age
From **45 years** old to **60 years** old

Gender
Both

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **54**

Randomization (investigator's opinion)
Randomized

Randomization description

Blinding (investigator's opinion)
Not blinded

Blinding description

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Aja university of medical sciences

Street address
Aja university of medical sciences, Shahid Etemadzadeh avenue, west Fatemi street

City
Tehran

Postal code

Approval date
2017-02-16, 1395/11/28

Ethics committee reference number
IR.AJAUMS.REC.1395.28

Health conditions studied

1

Description of health condition studied
Osteoarthritis of knee

ICD-10 code
M17.9

ICD-10 code description
Gonarthrosis, unspecified

Primary outcomes

1

Description
pain severity

Timepoint
at the lunch of study, at the end of 6th weak, at the end of first month and at the end of 6th month

Method of measurement
Visual analogue scale, Knee injury and Osteoarthritis Outcome Score (KOOS) and Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) questionnaires

Secondary outcomes

1

Description
daily activity difficulty

Timepoint
at the lunch of study, at the end of 6th weak, at the end of first month and at the end of 6th month

Method of measurement
Knee injury and Osteoarthritis Outcome Score (KOOS) and Western Ontario and McMaster Universities Osteoarthritis Index (WOMAC) questionnaires

2

Description
difficulty in exersice

Timepoint
at the lunch of study, at the end of 6th weak, at the end of first month and at the end of 6th month

Method of measurement
Knee injury and Osteoarthritis Outcome Score (KOOS)

3

Description
Quality of life

Timepoint
at the lunch of study, at the end of 6th weak, at the end of first month and at the end of 6th month

Method of measurement
Knee injury and Osteoarthritis Outcome Score (KOOS)

Intervention groups

1

Description
Strengthening exercises, Flexibility exercises, Endurance exercises and active range of motion will be trained to the first group. In addition a pamphlet which illustrates exercise movements will be given to each patient. patients should do these exercises 3 times a week for 6 weeks. Also before exercise they should put a bag of warm water on their knees for about 20 minutes. The doctor will monitor patients over the phone once a week.

Category
Rehabilitation

2

Description
The second group should attend in the rehabilitation clinic 3 times a week for 6 weeks. They will receive passive modalities including hot pack for 20 minutes, Trans-cutaneous Electrical Nerve Stimulation (TENS) with 50 Hz frequency for 20 minutes and Ultra-Sonography with 1 MHz frequency and the intensity of 1 watt per square centimeter for 20 minutes.
Category
Rehabilitation

Recruitment centers

1

Recruitment center
Name of recruitment center
Emam reza Hospital
Full name of responsible person
Street address
City
Tehran

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Aja university of medical science
Full name of responsible person
Kamran Azma
Street address
Emam reza hospital,Etemadzadeh Street
City
Tehran
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Aja university of medical science
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
Aja university of medical science
Full name of responsible person
Sara sadat Mohsenalhosseini
Position
Doctorate
Other areas of specialty/work
Street address
First floor,39 No,Shams Alley,Vesal shirazi street
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Web page address

Person responsible for updating data

Contact
Name of organization / entity
Full name of responsible person
Position
Other areas of specialty/work
Street address
City
Postal code
Phone
00
Fax
Email
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