

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

09 Jun 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

###### Name

Kamran Azma

###### Name of organization / entity

Aja University of Medical Science

###### Country

Iran (Islamic Republic of)

###### Phone

+98 21 8888 4489

###### Email address

k.azma@ajaums.ac.ir

##### 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 week, 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 week, 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 exercise

##### **Timepoint**

at the lunch of study, at the end of 6th week, 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 week, 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

### City

Tehran

### Postal code

### Phone

+98 21 6641 4596

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### Email

saramah22@gmail.com

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## Person responsible for scientific inquiries

### Contact

#### Name of organization / entity

Aja university of medical science

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#### Position

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#### Other areas of specialty/work

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## Person responsible for updating data

### Contact

#### Name of organization / entity

#### Full name of responsible person

#### Position

#### Other areas of specialty/work

#### Street address

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#### Postal code

#### Phone

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#### 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*