

Clinical Trial Protocol

Iranian Registry of Clinical Trials

27 May 2026

Comparison of therapeutic effects of intraarticular Hyaluronic acid injections with and without ultrasound guidance in patients with moderate knee osteoarthritis

Protocol summary

Summary

Objectives: Our aim in this study is to evaluate the role of ultrasound in increasing the range of motion and reducing pain in patients with moderate knee osteoarthritis. (2) design: In this study, 40 patients with moderate knee osteoarthritis referring to physical medicine and rehabilitation clinic, Imam Reza Hospital, Tabriz will be included in the study after qualifying the inclusion and exclusion criteria and obtaining the informed consent. (3) Setting and conduct: Patients will be randomly divided to groups of 20. For randomization, we will use computerized randomization with Excel software. Inclusion criteria are age between 50 and 80 years old, grade 2 or 3 knee osteoarthritis based on Kellgren and Lawrence grading scale, not having any rheumatologic diseases and not responding to conservative medical therapies. Exclusion criterion is receiving corticosteroids. (4) Intervention: Patients will be divided into two groups of intraarticular Hyaluronic acid injection with ultrasound guidance and without ultrasound guidance. In intervention group, the route will be first defined and confirmed by using ultrasound. In the other group injection will be performed in superior lateral part without using other instruments. Three injections will be performed for each patients with a two week interval between injections. (5) Main outcome measures: Pain severity at rest, Pain severity while moving, knee range of motion, evaluation time and timed up and go test will be evaluated before study, after the last injection and two months after the last injection.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201401043217N8**
Registration date: **2014-01-31, 1392/11/11**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2014-01-31, 1392/11/11

Registrant information

Name

Fariba Eslamian

Name of organization / entity

Tabriz University of Medical Sciences

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Recruitment status

Recruitment complete

Funding source

Vice Chancellor for research of Tabriz University of Medical Sciences

Expected recruitment start date

2013-08-23, 1392/06/01

Expected recruitment end date

2013-12-21, 1392/09/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of therapeutic effects of intraarticular Hyaluronic acid injections with and without ultrasound

guidance in patients with moderate knee osteoarthritis

Public title

Evaluating the effects of using an ancillary method for performing intraarticular injections in patients with knee osteoarthritis

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: Age between 50 and 80 years old; grade 2 or 3 knee osteoarthritis based on Kellgren and Lawrence grading scale; not having any rheumatologic diseases; not responding to conservative medical therapies. Exclusion criteria: Receiving corticosteroids.

Age

From **50 years** old to **80 years** old

Gender

Both

Phase

3

Groups that have been masked

No information

Sample size

Target sample size: **40**

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

For randomization, we used computerized randomization with Excel software.

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Tabriz University of Medical Sciences

Street address

Ethics committee, Tabriz University of Medical Sciences, Golgasht Street, Azadi Street, Tabriz

City

Tabriz

Postal code

Approval date

2012-08-10, 1391/05/20

Ethics committee reference number

91165

Health conditions studied

1

Description of health condition studied

knee osteoarthritis

ICD-10 code

M15.9

ICD-10 code description

Generalized osteoarthritis NOS

Primary outcomes

1

Description

Pain severity at rest

Timepoint

Before starting the study and two months after the third injection

Method of measurement

Using visual analogue scale

2

Description

Knee's range of motion

Timepoint

Before starting the study and two months after the third injection

Method of measurement

By using goniometry

3

Description

Pain severity while moving

Timepoint

Before starting the study and two months after the third injection

Method of measurement

Using visual analogue scale

Secondary outcomes

empty

Intervention groups

1

Description

In intervention group, the route will be first defined and confirmed by using ultrasound and the the injection will be performed.

Category

Treatment - Drugs

2

Description

In the control group injection will be performed in

superior lateral part without using other instruments.

Category

Treatment - Drugs

Recruitment centers**1****Recruitment center****Name of recruitment center**

Imam Reza Hospital

Full name of responsible person

Dr. Roja Javadi

Street address

Department of Physical Medicine and rehabilitation,
Imam Reza Hospital, Daneshgah Square, Tabriz

City

Tabriz

Sponsors / Funding sources**1****Sponsor****Name of organization / entity**

Vice Chancellor for research of Tabriz University of
Medical Sciences

Full name of responsible person

Dr. Seyyed Kazem Shakouri

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Vice Chancellor for research, Tabriz University of
Medical Sciences, Daneshgah square, Tabriz

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Tabriz

Grant name

-

Grant code / Reference number

-

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

Yes

Title of funding source

Vice Chancellor for research of Tabriz 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**

Tabriz University of Medical Sciences

Full name of responsible person

Dr. Roja Javadi

Position

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Position

Associate professor of Physical Medicine &
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Full name of responsible person

Dr. Roja Javadi

Position

Physical Medicine and rehabilitation resident

Other areas of specialty/work**Street address**

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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