Clinical Trial Protocol
Iranian Registry of Clinical Trials

17 Sep 2026

Comparison of the results of anteromedial and anterolateral tibial tunnel methods in posterior cruciate ligament reconstruction: a randomized clinical trial

Protocol summary

Study aim
To compare the results of anteromedial and anterolateral tibial tunnel methods in posterior cruciate ligament reconstruction

Design
This is a randomized clinical trial with control group, in which eligible patients will be randomly assigned through the block randomization to the intervention groups

Settings and conduct
This study will be performed in the Besat Hospital in Hamadan city on 36 eligible patients. The patients will be randomly assigned to the intervention groups through the block randomization. Blinding is not possible in this study.

Participants/Inclusion and exclusion criteria
Inclusion criteria: Age of 18 to 65 years Rupture of the posterior cruciate tendon Exclusion criteria: Coagulopathy disorder

Intervention groups
Intervention group 1: Arthroscopic surgery of the knee in order to reconstruct the posterior cruciate ligament of the knee by using single-strand Achilles graft through the medial anterior tibial tunnel while the knee is in 90 degree flexion. Intervention group 2: Arthroscopic surgery of the knee in order to reconstruct the posterior cruciate ligament of the knee by using single-strand Achilles graft through the medial lateral tibial tunnel while the knee is in 90 degree flexion.

Main outcome variables
Primary outcome: Average pain score, the average time to return to daily activities, the average range of motion limitation Secondary outcome: Hematoma

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20120215009014N472**
Registration date: **2023-05-03, 1402/02/13**
Registration timing: **prospective**

Last update: **2023-05-03, 1402/02/13**
Update count: **0**

Registration date
2023-05-03, 1402/02/13

Registrant information

Name
Jalal Poorolajal

Name of organization / entity
Department of Epidemiology & Biostatistics Hamadan University of Medical Sciences

Country
Iran (Islamic Republic of)

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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2023-05-22, 1402/03/01

Expected recruitment end date
2023-06-22, 1402/04/01

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title

Comparison of the results of anteromedial and anterolateral tibial tunnel methods in posterior cruciate ligament reconstruction: a randomized clinical trial

Public title
Comparison of the results of anteromedial and anterolateral tibial tunnel methods in posterior cruciate ligament reconstruction
Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria:
Age of 18 to 65 years Rupture of the posterior cruciate tendon
Exclusion criteria:
Coagulopathy disorder
Age
From **18 years** old to **65 years** old
Gender
Both

Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: **36**
Randomization (investigator's opinion)
Randomized
Randomization description
The patients will be randomly assigned to intervention and control groups using block randomization. For this purpose, we will prepare four sheets of paper, writing on two sheets the name of the intervention and on the other two sheets the name of the control. The paper sheets will be pooled, placed in a container, and randomly drawn one at a time for each patient without replacement until all four sheets are drawn. The four paper sheets will be then placed back into the container, and this action repeated until the sample size is reached.
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
Ethics Committee of Hamadan University of Medical Sciences
Street address
Vice-chancellor for Research and Technology, Hamadan University of Medical Sciences, Shahid Fahmideh Ave
City
Hamadan
Province
Hamadan
Postal code
6517838695
Approval date
2023-04-29, 1402/02/09
Ethics committee reference number
IR.UMSHA.REC.1402.040

Health conditions studied

1

Description of health condition studied
Rupture of the posterior cruciate tendon
ICD-10 code
M23.62
ICD-10 code description
Other spontaneous disruption of posterior cruciate ligament of knee

Primary outcomes

1

Description
Average pain score
Timepoint
In the fourth and eighth weeks and the third month after surgery
Method of measurement
Using a visual analog scale (VAS)

2

Description
The average time to return to daily activities
Timepoint
In the fourth and eighth weeks and the third month after surgery
Method of measurement
By taking a history

3

Description
The average range of motion limitation
Timepoint
In the fourth and eighth weeks and the third month after surgery
Method of measurement
Using the Lysholm Knee Scoring Scale

Secondary outcomes

1

Description

Hematoma

Timepoint

In the fourth and eighth weeks and the third month after surgery

Method of measurement

With clinical examination

Intervention groups

1

Description

Intervention group 1: Arthroscopic surgery of the knee in order to reconstruct the posterior cruciate ligament of the knee by using single-strand Achilles graft through the medial anterior tibial tunnel while the knee is in 90 degree flexion.

Category

Treatment - Surgery

2

Description

Intervention group 2: Arthroscopic surgery of the knee in order to reconstruct the posterior cruciate ligament of the knee by using single-strand Achilles graft through the medial lateral tibial tunnel while the knee is in 90 degree flexion.

Category

Treatment - Surgery

Recruitment centers

1

Recruitment center

Name of recruitment center

Besat Hospital in Hamadan city

Full name of responsible person

Dr Alireza Naderi

Street address

Besat Hospital, Shahed Square

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Hamedan University of Medical Sciences

Full name of responsible person

Dr. Reza Shokoohi

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Hamadan University o

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Grant name

Grant code / Reference number

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

Yes

Title of funding source

Hamedan University of Medical Sciences

Proportion provided by this source

100

Public or private sector

Public

Domestic or foreign origin

Domestic

Category of foreign source of funding

empty

Country of origin

Type of organization providing the funding

Academic

Person responsible for general inquiries

Contact

Name of organization / entity

Hamedan University of Medical Sciences

Full name of responsible person

Dr Alireza Naderi

Position

Resident of Orthopedic

Latest degree

Medical doctor

Other areas of specialty/work

Orthopedics

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Person responsible for scientific

inquiries

Contact

Name of organization / entity
Hamedan University of Medical Sciences

Full name of responsible person
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Person responsible for updating data

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Full name of responsible person
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Other areas of specialty/work
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Sharing plan

Deidentified Individual Participant Data Set (IPD)
Undecided - It is not yet known if there will be a plan to make this available

Study Protocol
Undecided - It is not yet known if there will be a plan to make this available

Statistical Analysis Plan
Undecided - It is not yet known if there will be a plan to make this available

Informed Consent Form
Undecided - It is not yet known if there will be a plan to make this available

Clinical Study Report
Undecided - It is not yet known if there will be a plan to make this available

Analytic Code
Undecided - It is not yet known if there will be a plan to make this available

Data Dictionary
Undecided - It is not yet known if there will be a plan to make this available