

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Ultrasound guided femoral nerve vs. fascia iliaca block: A randomized trial of analgesia in femoral injury

Protocol summary

Study aim

To compare the analgesic effects of ultrasound guided femoral nerve block with ultrasound guided fascia iliaca block in femoral fractures

Design

Randomized, parallel group trial with blinded outcome assessment. Randomization will be done by simple randomization using random numbers table.

Settings and conduct

This study will be conducted in Bahonar Academic Hospital, a level 2 urban trauma center located in Kerman, Iran. Enrolled patients will undergo ultrasound guided fascia iliaca or femoral nerve block, performed by a specifically trained senior resident of emergency medicine, which will be directly supervised by an attending physician of emergency medicine with 2 years of academic experience in both of the block methods. Assessment of pain scores (using a numeric rating scale) will be performed before and 20 minutes and 1 hour after the procedure and in the time of disposition from the emergency department by a registered nurse on duty who is blinded to the method of block.

Participants/Inclusion and exclusion criteria

All patients over 18 years of age with femoral fractures will be included. Those with distracting injuries, impaired consciousness, lidocaine hypersensitivity, coagulopathy, sensory deficit and those who have already received pain medications will be excluded.

Intervention groups

The two groups will undergo two kinds of ultrasound guided blocks: for group 1 fascia iliaca block and for group 2 femoral nerve block will be performed.

Main outcome variables

Pain scores 20 minutes and 1 hour after the procedure

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20131226015941N8**

Registration date: **2019-05-16, 1398/02/26**

Registration timing: **prospective**

Last update: **2019-05-16, 1398/02/26**

Update count: **0**

Registration date

2019-05-16, 1398/02/26

Registrant information

Name

Amirhossein Mirafzal

Name of organization / entity

Kerman University of Medical sciences

Country

Iran (Islamic Republic of)

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+98 34 1247 4638

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2019-05-22, 1398/03/01

Expected recruitment end date

2019-08-23, 1398/06/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Ultrasound guided femoral nerve vs. fascia iliaca block: A randomized trial of analgesia in femoral injury

Public title

Ultrasound guided femoral nerve vs. facia iliaca block

Purpose

Treatment

Inclusion/Exclusion criteria**Inclusion criteria:**

Patients over 18 years of age Patients with proximal femoral fracture Patients with femoral shaft fracture

Exclusion criteria:

Presence of distracting injury Impaired consciousness Hypersensitivity to lidocaine Coagulopathy Sensory deficit in the limbs for any reason Not willing to participate in the study Receiving pain killers before enrollment

Age

From **18 years** old

Gender

Both

Phase

N/A

Groups that have been masked

- Participant
- Outcome assessor

Sample size

Target sample size: **60**

Randomization (investigator's opinion)

Randomized

Randomization description

Patients will be randomized by simple randomization method using random numbers table. Each patient will be the unit of randomization. The sequence of numbers will be read from top to bottom, starting from the left column. Even numbers will be assigned as group 1 (fascia iliaca block) and odd numbers as group 2 (femoral nerve block). Allocation concealment will be done using sealed opaque envelopes. The group assigned to each number will be written on a small paper and put in the envelope. The sequential numbers of the patients will be written on the envelopes, which are kept safe by the head-nurse of the emergency department.

Blinding (investigator's opinion)

Double blinded

Blinding description

Participants of the study will be blinded to the study group since the syringes and agents used for both blocks are similar (lidocaine) and the techniques of block are almost the same from the outside view (the main difference between the two methods is recognizable by the ultrasound view which will not be available for the patient). The person who will be evaluating the pain scores of the patient before and after the blocks will be blinded to the procedure. He/She will be a registered nurse on duty.

Placebo

Not used

Assignment

Parallel

Other design features**Secondary Ids**

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

Ethics committee of Kerman University of Medical Sciences

Street address

Somaye crossroad, Jahad Blv., Ebne-Sina St., next to Besat Clinic

City

Kerman

Province

Kerman

Postal code

7610813159

Approval date

2019-04-23, 1398/02/03

Ethics committee reference number

IR.KMU.REC.1398.050

Health conditions studied**1****Description of health condition studied**

Femoral fracture

ICD-10 code

S72

ICD-10 code description

Unspecified fracture of femur

Primary outcomes**1****Description**

Pain score by numeric rating scale at 20 minutes after the procedure

Timepoint

Twenty minutes after the procedure

Method of measurement

Asking the patient

2**Description**

Pain score by numeric rating scale at 1 hour after the procedure

Timepoint

One hour after the procedure

Method of measurement

Asking the patient

Secondary outcomes

1

Description

Total administered dose of intravenous fentanyl (if administered)

Timepoint

After 1 hour from the procedure to the time of disposition

Method of measurement

Recording by the investigator

2

Description

Complications of the procedure

Timepoint

From the beginning of the procedure to the discharge of the patients

Method of measurement

Evaluation by the investigator

Intervention groups

1

Description

Intervention group: Fascia iliaca block will be performed under the real time vision by the ultrasound device (Mindray, 2012, China) and after proper sterile preparations. The block will be performed by a senior resident of Emergency Medicine trained by a pain medicine fellow. The procedure will be supervised by an attending physician of emergency medicine with certification of ultrasound guided nerve blocks and 2 years experience of the procedure. Firstly, fascia iliaca will be recognized in the ultrasound view of the lowest part of the abdomen and using a 20 gauge needle, 20 ml of 1% lidocaine (Caspitantamin, Iran) will be injected under the fascia; tissue expansion is checked by ultrasound in the time of injection.

Category

Treatment - Drugs

2

Description

Control group: Femoral nerve block is assigned as the control procedure since there have been more research on it and its superiority relative to systemic analgesia has been confirmed by the literature. Femoral nerve block will be performed under the real time vision by the ultrasound device (Mindray, 2012, China) and after proper sterile preparations. The block will be performed by a senior resident of Emergency Medicine trained by a pain medicine fellow. The procedure will be supervised by an attending physician of emergency medicine with certification of ultrasound guided nerve blocks and 2 years experience of the procedure. Firstly, femoral nerve, artery and vein will be recognized in the ultrasound view of the inguinal region and using a 20 gauge needle, 20 ml of 1% lidocaine (Caspitantamin, Iran) will be injected in the sheath covering the nerve (puncture of the nerve itself should be avoided by the performer); tissue expansion is checked by ultrasound in

the time of injection.

Category

Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center

Bahonar Academic Hospital

Full name of responsible person

Amirhossein Mirafzal

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Gharani St.,

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Kerman University of Medical Sciences

Full name of responsible person

Abbas Pardakhty

Street address

Somaye crossrd., Jahad blv., Kerman

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7116913555

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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

Kerman 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

Kerman University of Medical Sciences

Full name of responsible person

Amirhossein Mirafzal

Position

Assistant professor

Latest degree

Specialist

Other areas of specialty/work

Emergency Medicine

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Person responsible for scientific inquiries

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Latest degree

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Person responsible for updating data

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

Yes - There is a plan to make this available

Study Protocol

Yes - There is a plan to make this available

Statistical Analysis Plan

Yes - There is a plan to make this available

Informed Consent Form

Yes - There is a plan to make this available

Clinical Study Report

Yes - There is a plan to make this available

Analytic Code

Yes - There is a plan to make this available

Data Dictionary

Yes - There is a plan to make this available

Title and more details about the data/document

All deidentified data set will be available for primary and secondary outcomes.

When the data will become available and for how long

Starting 1 year after publication

To whom data/document is available

The data will be available only for people in academic positions.

Under which criteria data/document could be used

No limitation considered for this part.

From where data/document is obtainable

please email your request to mirafzal@kmu.ac.ir The responsible person is Amirhossein Mirafzal

What processes are involved for a request to access data/document

The data set will be provided in one month

Comments