

Clinical Trial Protocol

Iranian Registry of Clinical Trials

11 Jun 2026

Comparison of wrist block versus hematoma block anesthesia in the treatment of neck of fifth metacarpal fracture in Rasht Poursina hospital

Protocol summary

Summary

(1) Objectives: Comparison of efficacy and clinical outcomes of wrist block versus hematoma block anesthesia in order to propose a preferred method for the local anesthesia before treatment of neck of fifth metacarpal fracture. (2) Design: single-center single-blinded randomized clinical trial. (3) Setting and conduct: after enrollment and taking consent forms, patients will be randomized into two groups using random block method and one of anesthetic interventions will be performed. (4) Participants including major eligibility criteria: all patients with the age between 18-75 years old with the diagnosis of the fifth metacarpal fracture. (5) Intervention: all patients receive 3 ml of Midazolam for sedation. While performing nerve blocking, pulse rate, blood pressure and cardiac activities are monitored. In "hematoma block" group, patients receive barbotage injection of lidocaine 2% (3-5 ml) without epinephrine in hematoma site. In "wrist block" group, after detecting landmarks with the help of a nerve locator, following shots will be injected respectively: 5-7 ml of lidocaine 2% without epinephrine in radial and median nerve and 4-5 ml of lidocaine 2% without epinephrine in ulnar nerve. (6) Main outcome measures: primary outcomes include pain intensity and patient satisfaction from anesthesia with the help of visual analogue scale (VAS). Secondary outcomes are angle correction fracture and grip strength of the fifth finger (compared to contra-lateral finger).

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201307067274N8**

Registration date: **2013-07-20, 1392/04/29**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2013-07-20, 1392/04/29

Registrant information

Name

Mohsen Mardani Kivi

Name of organization / entity

Guilan University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 13 1321 1470

Email address

mardani@gums.ac.ir

Recruitment status

Recruitment complete

Funding source

Vice chancellor for research, Guilan University of Medical Sciences

Expected recruitment start date

2013-01-04, 1391/10/15

Expected recruitment end date

2013-07-06, 1392/04/15

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of wrist block versus hematoma block anesthesia in the treatment of neck of fifth metacarpal fracture in Rasht Poursina hospital

Public title

Comparison of "hematoma block" versus "wrist block" anesthesia in the treatment of fifth metacarpal fracture

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: all patients with the age between 18-75 years old with type I or II in ASA classification whom are candidate for the reduction of the fifth metacarpal fracture. Exclusion criteria: hyper-sensitivity or allergy to local anesthesia; local active infection in the site of injection; coagulopathy disorders; and drug abuse.

Age

From **18 years** old to **75 years** old

Gender

Both

Phase

2-3

Groups that have been masked

No information

Sample size

Target sample size: **98**

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Single 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, Guilan University of Medical Sciences

Street address

Vice chancellor for research, Guilan University of Medical Sciences, Namjou avenue

City

Rasht

Postal code

Approval date

2013-01-01, 1391/10/12

Ethics committee reference number

1910354601

Health conditions studied

1

Description of health condition studied

Fracture of fifth metacarpal bone

ICD-10 code

S62.3

ICD-10 code description

Fracture of other metacarpal bone

Primary outcomes

1

Description

Pain intensity

Timepoint

pre- intra- and 5 minute post-reduction

Method of measurement

Visual analogue scale

2

Description

patient satisfaction

Timepoint

during the reduction

Method of measurement

Visual analogue scale

Secondary outcomes

1

Description

Angle correction of the fracture

Timepoint

2 month post treatment

Method of measurement

Goniometer

2

Description

Grip strength of the fifth finger (compared to contra-lateral finger)

Timepoint

2 month post treatment

Method of measurement

Dynamometer

Intervention groups

1

Description

Group A (hematoma block anesthesia): barbotage injection of the lidocaine 2% (3-5 ml) without epinephrine in hematoma site.

Category

Treatment - Other

2

Description

Group B (wrist block anesthesia): after detecting landmarks with the help of a nerve locator, following shots will be injected respectively: 5-7 ml of lidocaine 2% without epinephrine in radial and median nerve, 4-5 ml

of lidocaine 2% without epinephrine in ulnar nerve.

Category

Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Imam-Reza Clinic of Poursina Hospital

Full name of responsible person

Dr Mohsen Mardani Kivi

Street address

Imam-Reza clinic, Poursina hospital, Parastar avenue

City

Rasht

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice chancellor for research, Guilan University of Medical Sciences

Full name of responsible person

Dr. Abdolrasoul Sobhani, Research chancellor of Guilan university of medical science

Street address

Vice chancellor for research, Guilan University of Medical Sciences, Namjou avenue

City

Rasht

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, Guilan 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

Guilan University of Medical Science

Full name of responsible person

Dr. Mohsen Mardani Kivi

Position

Assistant Professor

Other areas of specialty/work

Street address

Orthopedic Department, Poursina Hospital, Parastar avenue.

City

Rasht

Postal code

Phone

+98 13 1321 1470

Fax

Email

mardani@gums.ac.ir;

dr_mohsen_mardani@yahoo.com

Web page address

Person responsible for scientific inquiries

Contact

Name of organization / entity

Guilan University of Medical Sciences

Full name of responsible person

Dr. Mohsen Mardani Kivi

Position

Assistant Professor

Other areas of specialty/work

Street address

Orthopedic Department, Poursina Hospital, Parastar avenue

City

Rasht

Postal code

Phone

+98 13 1321 1470

Fax

Email

mardani@gums.ac.ir

Web page address

Person responsible for updating data

Contact

Name of organization / entity

Guilan University of Medical Sciences

Full name of responsible person

Dr. Mohsen Mardani Kivi

Position

Orthopedic Surgeon, Assistant Professor

Other areas of specialty/work

Street address

Orthopedic Department, Poursina Hospital, Parastar avenue

City

Rasht

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