

Clinical Trial Protocol

Iranian Registry of Clinical Trials

17 Sep 2026

Evaluation of analgesic effect of nitroglycerin additive to lidocaine in intravenous regional anesthesia in forearm surgery

Protocol summary

Summary

The purpose of this study is evaluation of analgesic effect of nitroglycerin additive to lidocaine in intravenous regional anesthesia in elbow surgery. Randomized, double-blind study with placebo control will performed on patients. 70 patients requiring elective surgery forearm over the age of 20 years and without a history of sickle cell anemia and nitroglycerin consumption and allergies will divided into 2 groups. For both groups, intravenous regional anesthesia will used. In the first group will used a combination of lidocaine and nitroglycerin, but in the second group will used a lidocaine and normal saline. Vital signs including heart rate, blood pressure and venous oxygen saturation will be recorded before and after tourniquet use. Tourniquet pain will be measured by VAS score and will be recorded.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2015072712642N17**

Registration date: **2015-08-15, 1394/05/24**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2015-08-15, 1394/05/24

Registrant information

Name

Majid Golestani Eraghi

Name of organization / entity

Shahid Beheshti University Of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 21 3336 0547

Email address

dr.golestani@arakmu.ac.ir

Recruitment status

Recruitment complete

Funding source

Vice Chancellor for research of Zahedan University of Medical Sciences

Expected recruitment start date

2015-03-21, 1394/01/01

Expected recruitment end date

2015-06-22, 1394/04/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Evaluation of analgesic effect of nitroglycerin additive to lidocaine in intravenous regional anesthesia in forearm surgery

Public title

Analgesic effect of nitroglycerin additive to lidocaine in intravenous regional anesthesia

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria: non urgent surgery; age more than 20 years. Exclusion criteria: Sickle cell anemia; Raynaud's phenomena; history of use of nitroglycerine; history of use of sildenafil in 24 hours ago; history of allergy.

Age

From **20 years** old to **50 years** old

Gender

Both

Phase

3

Groups that have been masked

No information

Sample size

Target sample size: 70

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Double blinded

Blinding description

Placebo

Used

Assignment

Parallel

Other design features

Randomized using sealed envelopes will be done.

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Zahedan University of Medical Sciences

Street address

Dr Hesabi.Squ

City

Zahedan

Postal code

Approval date

2011-06-22, 1390/04/01

Ethics committee reference number

420/س

Health conditions studied

1

Description of health condition studied

The intravenous regional anesthesia

ICD-10 code

Y48.3

ICD-10 code description

Anaesthetics and therapeutic gases

Primary outcomes

1

Description

Patient's tourniquet pain

Timepoint

At 5, 10, 15, 20, 40 minutes after the start of operation will be evaluated.

Method of measurement

According to VAS score

2

Description

Venous oxygen saturation

Timepoint

Before and after use tourniquet

Method of measurement

By pulse oximetry based on mmHg

Secondary outcomes

1

Description

Blood Pressure

Timepoint

Before and after use tourniquet

Method of measurement

By mercury sphygmomanometer based on mmHg

2

Description

Heart Rate

Timepoint

Before and after use Tourniquet

Method of measurement

By pulse oximetry based on the number of minutes

Intervention groups

1

Description

In the control group local anesthetic solution of 3miligeram per kilogeram body weight lidocaine with a concentration of 0.5percentage diluted with normal saline will injected via intravenous cannula on Back of the hand

Category

Prevention

2

Description

In the Intervention group local anesthetic of 3 miligeram per kilogeram body weight lidocaine with a concentration of 0.5percentage addition to 200 microgeram nitroglyserine injected via intravenous cannula on back of the hand.

Category

Prevention

Recruitment centers

1

Recruitment center

Name of recruitment center

Khatamol anbia Hospital

Full name of responsible person

Majid Golestani Eraghi

Street address
Jamejam Boulvar
City
Zahedan

Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Vice Chancellor for research of Zahedan University of
Medical Sciences

Full name of responsible person
Hamidreza Mahmoodzadeh Sagheb

Street address
Dr Hesabi.Squ

City
Zahedan

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 Zahedan 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

Person responsible for scientific inquiries

Contact

Name of organization / entity
Department of Anesthesia of Shahid Beheshti
University of Medical Science

Full name of responsible person
Alireza Jahangirifard

Position

Fellowship of Cardiac Anesthesia

Other areas of specialty/work

Street address

Darabad Ave

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alirezajahangiri@sbmu.ac.ir

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Person responsible for updating data

Contact

Name of organization / entity

Department of Anesthesia of Shahid Beheshti
University of Medical Science

Full name of responsible person

Majid Golestani Eraghi

Position

Fellowship specialty critical care

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