

Clinical Trial Protocol

Iranian Registry of Clinical Trials

27 Jul 2026

Effect of intravenous magnesium sulphate infusion during spinal anesthesia on motor blockade, postoperative pain and analgesic consumption in Inguinal surgery

Protocol summary

Summary

Abstract Background: In a randomized, double-blind, prospective study, we investigated efficacy of intravenous infusion of magnesium sulphate to reduce post-operative pain in patients undergoing inguinal surgery. **Method:** We randomly divided hundred patients age 18-55 years old and ASA class I-II undergoing inguinal surgery into two groups. The magnesium group (Group M) received magnesium sulphate 50 mg/kg i.v. in 10ml normal saline in 10 minutes and 15 mg/kg/h by continuous infusion during the operation in one hour. The control group (Group S) received the same amount of normal saline. All patients received spinal anesthesia. Postoperative pain scores, Pethidin consumption, motor block and the incidences of shivering, postoperative nausea, and vomiting were evaluated immediately after surgery and at 2, 3, 4, 6, 12, and 24 h after surgery.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201201088645N1**

Registration date: **2012-08-12, 1391/05/22**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2012-08-12, 1391/05/22

Registrant information

Name

Vahid Nezamabadi

Name of organization / entity

Ahvaz Jondishapour University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 61 1374 3037

Email address

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Recruitment status

Recruitment complete

Funding source

Ahvaz Jondishapour University of Medical Sciences

Expected recruitment start date

2011-09-23, 1390/07/01

Expected recruitment end date

2012-01-20, 1390/10/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of intravenous magnesium sulphate infusion during spinal anesthesia on motor blockade, postoperative pain and analgesic consumption in Inguinal surgery

Public title

Effect of magnesium sulphate on postoperative pain

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: Age between 18-55; ASA 1-2; Exclusion criteria: Drug abuser or substance addiction; Allergy to Opioid or pain reliefs; Allergy to Mg SO₄; Unstable hemodynamic during operation; Patient dislike to attend

Age

From **18 years** old to **55 years** old

Gender

Both

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **100**

Randomization (investigator's opinion)
Randomized

Randomization description

Blinding (investigator's opinion)
Single blinded

Blinding description

Placebo
Used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethic committee of Ahvaz Jondishapour University of Medical Sciences

Street address

Golestan Boulevard

City

Ahwaz

Postal code

Approval date

2011-07-09, 1390/04/18

Ethics committee reference number

u90132

Health conditions studied

1

Description of health condition studied

Pain

ICD-10 code

K40.3

ICD-10 code description

Unilateral or unspecified inguinal hernia, with obstruction, without gangrene

Primary outcomes

1

Description

Pain

Timepoint

1st, 2nd, 3rd, 4th, 6th, 12th and 24th hour after spinal

anesthesia

Method of measurement

Visual Analogue Scale (VAS)

Secondary outcomes

1

Description

Length of motor blockade

Timepoint

1st, 2nd, 3rd, 4th, 6th, 12th and 24th hour after spinal anesthesia

Method of measurement

Physical exam

2

Description

Opioid consumption

Timepoint

24th hour after spinal anesthesia

Method of measurement

calculate the amount of opioids

Intervention groups

1

Description

10 minute after intra techal injection, 50 mg/kg of MgSo4 in 100 c c normal saline in fused in ten minute and followed by infusing 15 mg/kg MgSo4 in 1 litre normal saline within one hour to case group

Category

Treatment - Drugs

2

Description

10 minute after intra techal injection, 100 c c normal saline in fused in ten minute and followed by infusing 1 litre normal saline within one hour to control group

Category

Placebo

Recruitment centers

1

Recruitment center

Name of recruitment center

Imam Khomeini Hospital

Full name of responsible person

Dr Alireza Olapour

Street address

Anesthesia Group, Imam Khomeini Hospital, 24 Metri ST.

City

Ahwaz

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Ahvaz Jondishapour University of Medical Sciences

Full name of responsible person

Dr Olapour

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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

Ahvaz Jondishapour 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

Ahvaz Jondishapour University of Medical Sciences

Full name of responsible person

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Ahvaz Jondishapour University of Medical Sciences

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Vahid Nezamabadi

Position

Resident of Anesthesiology

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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