Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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

nezamabadi.v@ajums.ac.ir

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 Boulvard
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 Analoge Scale (VAS)

Secondary outcomes

1

Description
Lenth of motor blockade
Timepoint
1st, 2nd, 3rd, 4th, 6th,12th and 24th hour after spinal anesthesia
Method of measurement
Physical exam

2

Description
Opoid consumption
Timepoint
24th hour after spinal anesthesia
Method of measurement
calculate the amount of opoids

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
Street address
Golestan St
City
Ahwaz
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
Dr Alireza Olapour
Position
Ostadyar
Other areas of specialty/work
Street address
Imam Hospital
City
Ahwaz
Postal code
Phone
+98 61 1337 3034
Fax
Email
olapour486@yahoo.com
Web page address

Person responsible for scientific inquiries

Contact
Name of organization / entity
Ahvaz Jondishapour University of Medical Sciences
Full name of responsible person
Dr MohamdReza Goushe
Position
Ostadyar
Other areas of specialty/work
Street address
Imam Hospital
City
Ahwaz
Postal code
Phone
+98 916 113 3216
Fax
Email
rgousheh@gmail.com
Web page address

Person responsible for updating data

Contact
Name of organization / entity
Ahvaz Jondishapour University of Medical Sciences
Full name of responsible person
Vahid Nezamabadi
Position
Resident of Anesthesiology
Other areas of specialty/work
Street address
City
Postal code
Phone
00
Fax
Email
nezamabadi.v@gmail.com
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