# Clinical Trial Protocol
# Iranian Registry of Clinical Trials

10 Jun 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**

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Vahid Nezamabadi

**Name of organization / entity**

Ahvaz Jondishapour University of Medical Sciences

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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 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
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Golestan St
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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

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## Person responsible for updating data

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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*