Clinical Trial Protocol
Iranian Registry of Clinical Trials

17 Sep 2026

The effect of intraoperative intravenous infusion of Mg sulfate during Laminectomy on post-operative analgesia

Protocol summary

Summary

Objectives: to investigate the effect of intraoperative intravenous infusion of Mg sulfate during Laminectomy on post-operative analgesia Study design: randomized double-blind controlled clinical trial. Inclusion criteria: aged 18-60 with ASA class I-II who were candidate for elective laminectomy. Exclusion criteria: major dysfunctions of liver, kidney or cardiovascular system especially atrioventricular block, experience of previous treatment with calcium channel blockers and drug abuse. The patients with coagulation disorders and emergent surgeries were also excluded from the study. Intervention: The 40 adult patients were randomly assigned into two groups of case and control group, they were similarly anesthetized. In the case group, after the induction of anesthesia, a loading dose of magnesium sulfate (30 mg/kg) was administered within 5 to 10 minutes followed by a maintenance dose of 10 mg/kg/h up to the end of the surgery; while, in the control group patients received normal saline. After the surgery, all patients received a patient-controlled intravenous analgesia (PCA) pump containing morphine. The first time of using PCA , the amount of consumed morphine during the first 24 hours, and pain score were recorded at 6,12,18 and 24 hours in the post-operative period.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2015012019470N12**
Registration date: **2015-04-01, 1394/01/12**
Registration timing: **retrospective**

Last update:
Update count: **0**

Registration date

2015-04-01, 1394/01/12

Registrant information

Name

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Name of organization / entity

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Recruitment status

Recruitment complete

Funding source

Vice Chancellor for Research, Shiraz University of Medical Science

Expected recruitment start date

2013-08-23, 1392/06/01

Expected recruitment end date

2014-02-20, 1392/12/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of intraoperative intravenous infusion of Mg sulfate during Laminectomy on post-operative analgesia

Public title

The effect of intraoperative intravenous infusion of Mg sulfate during Laminectomy on post-operative analgesia

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria: 18-60 of age, ASA class I-II who were candidate for elective laminectomy. Exclusion criteria: major dysfunctions of liver, kidney or cardiovascular system especially atrioventricular block, experience of

previous treatment with calcium channel blockers and drug abuse, patients with coagulation disorders and emergent surgeries.

Age

From **1 month** old

Gender

Male

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)

Double blinded

Blinding description

Placebo

Used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics Committee of Shiraz University of Medical Sciences

Street address

Central Building of Shiraz University of Medical Sciences, Zand Street

City

Shiraz

Postal code

Approval date

2010-09-23, 1389/07/01

Ethics committee reference number

cp-p-90-2703

Health conditions studied

1

Description of health condition studied

Laminectomy

ICD-10 code

M51.1+

ICD-10 code description

Lumbar and other intervertebral disc disorders with radiculopathy (G55.1*)

Primary outcomes

1

Description

the effect of intraoperative intravenous infusion of Mg sulfate during Laminectomy on post-operative analgesia

Timepoint

pain score were recorded at 6,12,18 and 24 hours in the post-operative period.

Method of measurement

VAS scale

Secondary outcomes

empty

Intervention groups

1

Description

In the case group, after the induction of anesthesia, a loading dose of magnesium sulfate (30 mg/kg) was administered within 5 to 10 minutes followed by a maintenance dose of 10 mg/kg/h up to the end of the surgery.

Category

Treatment - Drugs

2

Description

In the control group patients received normal saline after the surgery.

Category

Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center

Namazi Hospital

Full name of responsible person

Ashkan Rahimi

Street address

Zand Street, Namazee Hospital

City

Shiraz

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice Chancellor for Research, Shiraz University of Medical Sciences

Full name of responsible person

Dr Seed Basir Hashemi

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Vice Chancellor for Research, Shiraz University of Medical Sciences, 7th floor, Central Building of Shiraz University of Medical Sciences, Zand Street
City
Shiraz
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, Shiraz 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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Name of organization / entity
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Person responsible for updating data

Contact

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