

Clinical Trial Protocol

Iranian Registry of Clinical Trials

24 Jul 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

Farzaneh Masihi

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

Street address

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**Contact****Name of organization / entity**

Shiraz University of Medical Sciences

Full name of responsible person

Ashkan Rahimi

Position

Anesthesia Resident/ Physician

Other areas of specialty/work**Street address**

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Web page address**Person responsible for scientific
inquiries****Contact****Name of organization / entity**

Shiraz University of Medical Sciences

Full name of responsible person

Sina Ghafaripour

Position

Fellowship in Anesthesia for Abdominal Organ
Transplantation

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Web page address**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