

Clinical Trial Protocol

Iranian Registry of Clinical Trials

28 Jun 2026

Magnesium effect on cardiovascular status & muscle relaxation during anesthesia, randomized clinical trial

Protocol summary

Summary

The purpose of this study is to determine the effect of Mg sulfate on arterial blood pressure, heart rate, need to non-depolarizing muscle relaxants, and arterial O₂ saturation on vertebral column surgeries. A total of 50 patients who are candidates of vertebral column surgery over a one-year period, were recruited and randomly assigned to receive Mg sulfate or normal saline, as placebo, as bolus dose before the surgery and continuous administration during the surgery. Blood pressure, pulse rate, non-depolarizing muscle relaxants will be measured and compared between groups.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT138902023773N1**

Registration date: **2011-01-13, 1389/10/23**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2011-01-13, 1389/10/23

Registrant information

Name

Farsad Imani

Name of organization / entity

Tehran University of Medical Sciences and Health Services

Country

Iran (Islamic Republic of)

Phone

+98 21 4469 0816

Email address

imanifar@sina.tums.ac.ir

Recruitment status

Recruitment complete

Funding source

Tehran University of Medical Sciences and Health Services

Expected recruitment start date

2003-12-21, 1382/09/30

Expected recruitment end date

2004-12-21, 1383/10/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Magnesium effect on cardiovascular status & muscle relaxation during anesthesia, randomized clinical trial

Public title

Magnesium effect on cardiovascular status & muscle relaxation during anesthesia

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: ASA class 1 and 2, scheduled for spine surgery Exclusion criteria: age>75, receiving sedatives, Antipsychotic, Calcium channel blocker drugs, Addicts to opium, Sensitive to magnesium and Hypertensive patients (more than 145/110)

Age

From **25 years** old to **75 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: 50

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

Tehran University of Medical Sciences

Street address

Ghods St., Keshavarz Blvd.

City

Tehran

Postal code

Approval date

2010-07-31, 1389/05/09

Ethics committee reference number

744/130/89/3

Health conditions studied

1

Description of health condition studied

Anesthesia

ICD-10 code

ICD-10 code description

Primary outcomes

1

Description

Heart rate

Timepoint

Permanent, but recoding is every 20 minutes during 1st hour then every hour

Method of measurement

By operating room monitoring instrument: BIOSYS company

2

Description

Blood pressure

Timepoint

Every 20 minutes during 1st hour then every hour

Method of measurement

Non invasive blood pressure monitoring instrument: BIOSYS company

3

Description

Muscle relaxation

Timepoint

Every 20 minutes during 1st hour then every hour

Method of measurement

peripheral nerve stimulator (model Innervator252 HEALTHCARE -Constant Current-)

Secondary outcomes

1

Description

Consumed Opium

Timepoint

During operation

Method of measurement

Microgram opium

2

Description

Pulse oximetry

Timepoint

Permanent

Method of measurement

pulse oximetry monitoring instrument: BIOSYS company

Intervention groups

1

Description

Magnesium, sulfate 50 mg/kg/10min, before induction of anesthesia and 8 mg/kg/h, intravenously throughout the surgery

Category

Treatment - Drugs

2

Description

Normal saline, 0.2 milliliter/kg/10min, IV, before induction of anesthesia and then 0.1 milliliter /kg/h throughout the surgery

Category

Placebo

Recruitment centers

1

Recruitment center

Name of recruitment center

Sina Hospital

Full name of responsible person

Farsad Imani, Anesthesiologist, Assistant professor

Street address

Imam Khomeini St. hasanabad Sq. Sina Hospital

City

Tehran

imanifar@tums.ac.ir

Web page address

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Tehran University of Medical Sciences and Health Services

Full name of responsible person

Farsad Imani

Street address

Imam Khomeini St. hasanabad Sq. Sina Hospital

City

Tehran

Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?

Yes

Title of funding source

Tehran University of Medical Sciences and Health Services

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

Tehran University of Medical Sciences and Health Services

Full name of responsible person

Farsad Imani

Position

Anesthesiologist, Assistant professor

Other areas of specialty/work

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Position

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Person responsible for updating data

Contact

Name of organization / entity

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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