

# 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 O<sub>2</sub> 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 Bvd.

##### 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**

http://sinahospital.tums.ac.ir

## 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**

**Street address**

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**City**

Tehran

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1136746911

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+98 66 3485 0010

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## Person responsible for scientific 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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## Person responsible for updating data

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**Name of organization / entity**

Tehran University of Medical Sciences and Health Services

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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*