

Clinical Trial Protocol

Iranian Registry of Clinical Trials

31 May 2026

Intravenous Infusion of magnesium sulfate in the control of post operative thoracotomy pain

Protocol summary

Summary

The aim of this clinical trial study is the assessment of intravenous infusion of Magnesium Sulfate for post Thorcotomy pain control. Therefore, in a double-blind RCT, 80 patients who were candidates for lateral Thoracotomy included and divided into two equal groups. First group undergone magnesium sulfate; 50 mg/kg as a bolus dose before starting surgery and continued with infusion rate of 500mg/hour up to 24 hours for postoperative period. Second group undergone normal saline (placebo) instead of magnesium sulfate. At the end of operation, muscle relaxant reversed and patients extubated. Anesthesia techniques were similar in the both groups. The Morphine PCA pumps were attached to all patients with: 20 minutes lockout time, 2 mg bolus dose, without basal infusion. After awaking, all patients transferred to ICU room. Pain intensity according VAS scale and dose of opioid consumption according milligram were recorded, at the time of 0, 2, 6, 12 and 24 postoperatively. Finally, pain score and amount of analgesic consumption were compared.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201107221772N8**

Registration date: **2012-03-13, 1390/12/23**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2012-03-13, 1390/12/23

Registrant information

Name

Dawood Aghamohammadi

Name of organization / entity

Tabriz University of Medical Sciences

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Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

Anesthesiology Research Team

Expected recruitment start date

2010-03-21, 1389/01/01

Expected recruitment end date

2011-12-22, 1390/10/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Intravenous Infusion of magnesium sulfate in the control of post operative thoracotomy pain

Public title

Effect of magnesium sulfate for post operative pain control

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion Criteria: 1) patients with ASA II-III 2) 20 to 60 rang of age 3) All patients needs thorachotomy Exclusion Criteria: 1) Drug sensitivities 2) avoidance of patient for drug infusion 3) addiction 4) bilateral thoracotomy 5) operation time more than 3 hours 6) Ejection Fraction less than 40% 7) pneumonectomy with less than 1.2 liter lung reserve in spirometry

Age

From **20 years** old to **60 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **80**

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**

Tabriz University of Medical Sciences

Street address

Vice Chancellor of Research, Faculty of
Medicine, Daneshgah Street

City

Tabriz

Postal code**Approval date**

2011-04-06, 1390/01/17

Ethics committee reference number

5/4/323

Health conditions studied**1****Description of health condition studied**

Thoracotomy

ICD-10 code

S21.1

ICD-10 code description

Open wound of front wall of thorax

2**Description of health condition studied**

pain

ICD-10 code

R07.1

ICD-10 code description

Precordial pain

Primary outcomes**1****Description**

Pain

Timepoint

Post operative time at 0, 2, 6, 12 and 24

Method of measurement

Visual Analogue Scale

Secondary outcomes**1****Description**

Rate of analgesic (morphine) consumption

Timepoint

post operative time at 0, 2, 6, 12 and 24

Method of measurement

Milligram Dose

Intervention groups**1****Description**

Saline normal infusion as placebo in control group

Category

Placebo

2**Description**

Bolus dose of magnesium Sulfate 50 mg/kg and
maintenance dose 500mg /hour

Category

Treatment - Drugs

Recruitment centers**1****Recruitment center****Name of recruitment center**

Imam Reza Teaching Hospital

Full name of responsible person

Dawood Aghamohammadi

Street address**City**

Tabriz

Sponsors / Funding sources**1****Sponsor****Name of organization / entity**

Tabriz University of Medical Sciences

Full name of responsible person

Dawood Aghamohammadi

Street addressAnesthesiology research team office, Faculty of
Medicine, Daneshgah Street,**City**

Tabriz

Grant name**Grant code / Reference number****Is the source of funding the same sponsor
organization/entity?**

Yes

Title of funding source

Tabriz 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**

Tabriz University of Medical Sciences

Full name of responsible person

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Position

Assistant Professor

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ahoo.com**Web page address****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*