

Clinical Trial Protocol

Iranian Registry of Clinical Trials

16 Sep 2026

The effect oral magnesium supplementation on outcomes improvement of patients after open heart surgery

Protocol summary

Summary

The aim of this study is to investigate the effect of oral magnesium supplementation on patient outcomes after cardiac surgery. In this clinical trial 100 patients undergoing open heart surgery who have eligibility criteria will be randomly assigned to the control and experimental groups. One day before surgery, patients who were hospitalized in the internal wards of men or women were given sufficient explanation. Informed written consent will be obtained from them. In this day the first part of the questionnaire which contains personal information and medical history, will be completed by the researcher personally. The Magnesium levels in both groups of patients Preoperative and also on the third day after that shall be measured. Patients in the intervention group will receive 500 mg of oral magnesium supplement every day from one day before the surgery and then will be continued until hospital discharge. After the surgery study outcomes including atrial fibrillation, Hypomagnesemia, nausea and vomiting, constipation, and hyperglycemia are measured by the researcher. The study results will be analyzed by SPSS software.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201402026778N4**
Registration date: **2014-04-29, 1393/02/09**
Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2014-04-29, 1393/02/09

Registrant information

Name

Seyed Tayeb Moradian Vafaei

Name of organization / entity

School of nursing and midwifery, Tehran university of medical sciences

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Recruitment status

Recruitment complete

Funding source

nursing faculty, Baghyattallah university of medical sciences

Expected recruitment start date

2013-12-31, 1392/10/10

Expected recruitment end date

2014-03-11, 1392/12/20

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect oral magnesium supplementation on outcomes improvement of patients after open heart surgery

Public title

Effect of oral magnesium supplementation on outcomes after open heart surgery

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria: patients with non-emergency cardiac surgery; age greater than 30 and less than 70 years; Not suffering from preoperative atrial fibrillation; Not

suffering from Preoperative nausea - vomiting and constipation; Not suffering from renal failure; No history of stroke and transient ischemic attack in the past month. Exclusion Criteria: Re operation for bleeding control; Being pacemaker dependent Postoperatively; The incidence of renal failure during the study

Age

From **30 years** old to **70 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **96**

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Baqiyatallah University of Medical Science

Street address

Tehran Vanak Square, Molla Sadra Ave.

City

Tehran

Postal code

Approval date

2014-01-05, 1392/10/15

Ethics committee reference number

Meeting No. 34

Health conditions studied

1

Description of health condition studied

Disorders of magnesium metabolism

ICD-10 code

E83.4

ICD-10 code description

hypomagnesemia

Primary outcomes

1

Description

Hypomagnesaemia

Timepoint

Preoperative and postoperative third day

Method of measurement

Serum ionized magnesium

2

Description

postoperative Nausea and vomiting

Timepoint

5 days, the patient's admission to the intensive care unit after cardiac surgery and internal parts of the heart

Method of measurement

Morrow assessment of nausea and vomiting

3

Description

Hyperglycemia

Timepoint

5 days, the patient's admission to the intensive care unit after cardiac surgery and internal parts of the heart

Method of measurement

Measurement of blood glucose

4

Description

Constipation

Timepoint

POST SURGERY 10 days

Method of measurement

According to Rome (III), Defecation of patients is recorded.

Secondary outcomes

1

Description

Post Operation Artrial Fibrillation

Timepoint

from the first to 5th postoperation day

Method of measurement

electrocardiogram and intensive care and internal wards central monitoring

Intervention groups

1

Description

The experimental group receiving 500 mg of oral magnesium supplementation per day.

Category

Treatment - Drugs

2

Description

Patients in the control group will receive the hospital routine care

Category

N/A

Recruitment centers

1

Recruitment center

Name of recruitment center

Heart Hospital jamaran

Full name of responsible person

Dr. Mohammad Saeid Ghiasi

Street address

Jamaran Heart Hospital, Jamran St, Niavaran St, Tehran

City

Tehran

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Nursing faculty, Baqiyyatallah university of medical sciences

Full name of responsible person

Doctor Abbas Ebad

Street address

Baqiyatallah University of Medical Sciences, Sheikh Bahaei St, Vanak Square, Tehran ... (Aj)

City

Tehran

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Nursing faculty, Baqiyyatallah 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

Baqiyyatallah university of medical sciences

Full name of responsible person

Alireza Mohamadpour

Position

Master of science in nursing student

Other areas of specialty/work

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Person responsible for scientific inquiries

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Name of organization / entity

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Full name of responsible person

Seyed Tayeb Moradian

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Faculty Member

Other areas of specialty/work

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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

