Clinical Trial Protocol
Iranian Registry of Clinical Trials

08 Jul 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 trial100 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 their. In this day the first part of the questionnaire which contain 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

Country

Iran (Islamic Republic of)

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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 Fibrilation

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 receiving500 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
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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*