Clinical Trial Protocol
Iranian Registry of Clinical Trials

18 Sep 2026

Effect of selenium injection on plasma level of TPO-I and CK-MB following CABG

Protocol summary

Summary

IHD constitutes 30% of patients who undergo surgery each year in the united states.One way to restore blood flow is CABG.Which leads to the release of inflammatory factors.This is a randomized clinical trial study , to evaluate selenium effect on plasma level TPO-I and ck-MB in patients undergoing cardiac surgery.The patients with normal levels of selenium are studied by randomly selecting a card in one of two groups receiving selenium and placebo.Before induction of anesthesia in selenium group 200µg selenium and in control group equivalent distilled water injected.in both groups induction done with similar values midazolam,sufentanyl and cis atra.in all patients,TPO-I and CK-MB measured before induction,immediately after CPB,24 and 48 hours after surgery.finally the emount of factors in two groups are compared.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2015041313456N4**
Registration date: **2015-05-17, 1394/02/27**
Registration timing: **prospective**

Last update:
Update count: **0**

Registration date

2015-05-17, 1394/02/27

Registrant information

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Recruitment status

Recruitment complete

Funding source

Guilan University of Medical Sciences

Expected recruitment start date

2015-06-05, 1394/03/15

Expected recruitment end date

2015-10-22, 1394/07/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of selenium injection on plasma level of TPO-I and CK-MB following CABG

Public title

Effect of selenium injection on plasma level of TPO-I and CK-MB following CABG

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria: age 30-65 years old; ASA class 2-3 with 3 vessels occlusion and EF>40-45% and normal preoperative level of selenium(for men: 29-107µg/l and for women: 27-150µg/l) Exclusion criteria: emergency surgery; EF<40%; combined CABG and valve surgeries.

Age

From **30 years** old to **65 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

Ethics committee of Guilan University of Medical Sciences

Street address

Shahid Beheshti Freeway

City

Rasht

Postal code

4193833697

Approval date

2014-09-30, 1393/07/08

Ethics committee reference number

1930330304

Health conditions studied

1

Description of health condition studied

CABG with CPB

ICD-10 code

T80.8

ICD-10 code description

Other complications following infusion, transfusion and therapeutic injection

Primary outcomes

1

Description

Thyroperoxidase (TPO)

Timepoint

Before induction, immediately after CPB, 24 and 48 hours after surgery

Method of measurement

IU/mL-serum

2

Description

Creatine phosphokinase

Timepoint

Before induction, immediately after CPB, 24 and 48 hours after surgery

Method of measurement

IU/m-Lserum

Secondary outcomes

empty

Intervention groups

1

Description

Intervention 2: 200 micro grams of distilled water (placebo) received. We measured by CK-MB, Troponin before the induction of anesthesia, as separate from the pump, 24 hours and 48 hours after surgery.

Category

Placebo

2

Description

Intervention1: 200 µg Selenium injected(Bio Sean American.co).We measured CK-MB, TRP before induction, once separated from the pump, 24 hours and 48 hours after surgery,

Category

Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center

Heshmat Hospital

Full name of responsible person

Abbas Sedighinejad

Street address

Fifteenth Khordad Street

City

Rasht

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice chancellor for research of Guilan University of Medical Sciences

Full name of responsible person

Abtin Heidarzadeh

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Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Vice chancellor for research of Guilan 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

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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