

Clinical Trial Protocol

Iranian Registry of Clinical Trials

02 Jun 2026

Potential effect of L-Carnitine on inflammatory biomarkers post cardiac artery bypass graft surgery

Protocol summary

Summary

The goal of this randomized clinical trial is to evaluate the impact of L-carnitine on the prevention of postoperative increase in inflammatory biomarkers following coronary artery bypass grafting (CABG) surgery. All patients who are a candidate for CABG without a prior history of seizure, thyroid dysfunction, liver or kidney failure and L-carnitine hypersensitivity included in our study. 100 patients were randomly assigned into two groups of 50 people (intervention and control groups). Permuted random block method will be used for randomization. The first group of patients will receive 6 g L-carnitine (2 g every 8 hours) for 2 days before and after surgery. The next group will not receive the drug. This is a single blinded clinical trial as the investigator is not aware of the arms. In both groups, blood samples are collected and biomarkers of inflammation including NLR, PLR and hs-CRP (48 hours before and after surgery) will be measured and compared between groups.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201706108698N20**

Registration date: **2017-07-11, 1396/04/20**

Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2017-07-11, 1396/04/20

Registrant information

Name

Azita Hajhossein Talasaz

Name of organization / entity

Department of Clinical Pharmacy, Faculty of Pharmacy, Tehran University of Medical Sciences

Country

Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

Tehran University of Medical Sciences

Expected recruitment start date

2017-06-22, 1396/04/01

Expected recruitment end date

2017-12-22, 1396/10/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Potential effect of L-Carnitine on inflammatory biomarkers post cardiac artery bypass graft surgery

Public title

The Effect of L-Carnitine on Inflammation Post Cardiac Surgery

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria: The patients who are a candidate for Coronary artery bypass graft surgery in Tehran Heart Center; Exclusion criteria: Valvular surgery; History of seizure; History of hypersensitivity reaction to L-carnitine; Chronic liver failure (Liver enzymes more than 3 times of upper limit of normal); Chronic kidney disease (Stage IV and V); Hypothyroidism

Age

No age limit

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **100**

Randomization (investigator's opinion)

Randomized

Randomization description**Blinding (investigator's opinion)**

Single blinded

Blinding description**Placebo**

Not used

Assignment

Parallel

Other design features**Secondary Ids**

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

Ethics committee of Tehran University of Medical Sciences

Street address

Keshavarz Blv., Qods and Keshavarz Intersection

City

Tehran

Postal code**Approval date**

2017-05-23, 1396/03/02

Ethics committee reference number

IR.TUMS.VCR.REC.1396.2361

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

Ischemic Heart Disease

ICD-10 code

I20

ICD-10 code description

Angina pectoris

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

NLR

Timepoint

Before and 48 hours post surgery

Method of measurement

CBC

2**Description**

PLR

Timepoint

Before and 48 hours post surgery

Method of measurement

CBC

3**Description**

hs-CRP

Timepoint

Before and 48 hours post surgery

Method of measurement

Elisa kit

Secondary outcomes

empty

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

Intervention 1: L-carnitine 3 g every 8 hours from 2 days before to 2 days after surgery

Category

Treatment - Drugs

2**Description**

Intervention 2: No additional drug would be prescribed.

Category

Treatment - Drugs

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

Tehran Heart Center

Full name of responsible person

Azita Hajhossein Talasaz

Street address

North Kargar and Jalale Ale Ahmad Intersection

City

Tehran

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice chancellor for research, Tehran University of Medical Sciences

Full name of responsible person

Dr. Masoud Yunesian

Street address

6th Floor, Keshavarz Blv. and Qods St. Intersestion

City

Tehran

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, Tehran 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**

Tehran University Of Medical Science

Full name of responsible person

Azita Hajhossein Talasaz

Position

Associate Professor

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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