Clinical Trial Protocol
Iranian Registry of Clinical Trials

18 Sep 2026

The effect of erythropoietin in reduction of tissue–reperfusion injury after coronary artery baypass graft

Protocol summary

Summary

The purpose of this double blind clinical trial is to evaluate the effect of Erythropoietin on the reduction of reperfusion injury after CABG (coronary artery bypass graft). Fifty patients will be randomly assigned into two groups either to receive Erythropoietin or not. Erythropoietin will be infused 5 minutes after the end of cross clamp on surgery. Troponin and CKMB will be measured before and 10 hours after the surgery. Electrocardiography and echocardiography will be performed before and at four day and one month after the surgery.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT138809102799N1**
Registration date: **2010-01-25, 1388/11/05**
Registration timing: **registered_while_recruiting**

Last update:
Update count: **0**

Registration date

2010-01-25, 1388/11/05

Registrant information

Name

Shervin Ziabakhsh Tabary

Name of organization / entity

Mazandaran University Of Medical Sciences

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Recruitment status

Recruitment complete

Funding source

Deputy of Research and Technology of Mazandarn University of Medical Sciences

Expected recruitment start date

2009-12-22, 1388/10/01

Expected recruitment end date

2011-01-20, 1389/10/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of erythropoietin in reduction of tissue–reperfusion injury after coronary artery baypass graft

Public title

The effect of erythropoietin in reduction of tissue–reperfusion injury after coronary artery baypass graft

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria: sign of angina pectoris need to revascularization after angiography, presence of indication for CABG Exclusion criteria: history of Myocardial Infarction since 3 months prior to the study, EF<30%, history of streptokinase taking, hemoglobin >16 , Cr > 2.5, receiving Erythropoietin since 6 months prior to the study, blood pressure > 150/95, history of Arterial fibrillation blood transfusion since 3 months prior to the study, heavy or cardiac trauma since 3 months prior to the study, polycytemia vera

Age

No age limit

Gender

Both

Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: **50**
Randomization (investigator's opinion)
Randomized
Randomization description
Blinding (investigator's opinion)
Double blinded
Blinding description
Placebo
Not used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Mazandarn University of Medical Sciences
Street address
Sari
City
Sari
Postal code
Approval date
2009-09-30, 1388/07/08
Ethics committee reference number
97-88

Health conditions studied

1

Description of health condition studied
Tissue-reperfusiuon injury
ICD-10 code
I25.1
ICD-10 code description
Atherosclerotic heart disease

Primary outcomes

1

Description
cardiac function (Wall Motion Score Index)
Timepoint
4 days, 30 days
Method of measurement
echocardiography

2

Description
cardiac function (Ejection Fraction)
Timepoint
Before surgery, 4 days and 30 days after surgery
Method of measurement
echocardiography

Secondary outcomes

1

Description
cardiac marker (CKMB)
Timepoint
Before and 10 hours after surgery
Method of measurement
labratory

2

Description
cardiac marker (Troponin I)
Timepoint
Before and 10 hours after surgery
Method of measurement
labratory

Intervention groups

1

Description
Erythropoietin (660 U/kg, 5 minutes after the end of cross clamp)
Category
Treatment - Drugs

2

Description
no intervention in control group
Category
N/A

Recruitment centers

1

Recruitment center
Name of recruitment center
Fatemeh Alzahra Hospital
Full name of responsible person
Street address
City
Sari

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Deputy of Research and Technology of Mazandarn University of Medical Sciences
Full name of responsible person
Seyed Jalal Hosseinimehr
Street address
Vice-chancellor of Research and Technology of Mazandarn University of Medical Sciences
City
Sari
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Deputy of Research and Technology of Mazandarn 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
Mazandaran University of Medical Sciences
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Email
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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