Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Effect of prophylactic intracoronary Adenosine infusion during primary percutaneous coronary intervention in Acute ST Elevation Myocardial infarction

Protocol summary

Summary

Objective: To assess the effect of prophylactic intracoronary adenosine infusion during primary percutaneous intervention in acute ST elevation myocardial infarction. Design: Randomized control trial. Setting: The eligible patients with acute ST elevation myocardial infarction who admitted to emergency room of Farshchian heart center during 2017-2018. Inclusion criteria: (a) ST elevation MI in ECG; (b) LAD and LCX lesion; (c) coronary lesion suitable for angioplasty; (d) TIMI flow 0-1. Exclusion criteria: (a) history of COPD or asthma; (b) patients who under treatment with dipyridamol; (c) Presentation with cardiogenic shock; (d) Patients who received fibrynolytic; (e) life expectancy less than 6 month; (f) stent thrombosis; (g) history of CABGs; (h) AV nodal block in first ECG; (I) TIMI flow 2-3 in angiography; (j) RCA lesion; (k) lack of patient satisfaction. Intervention: Two separated doses of 40 microgram adenosine in 10 ml normal saline 0.9% intracoronary infusion during primary PCI on LAD or LCX. Control: Two separated doses of Intracoronary 10 ml normal saline 0.9% infusion in left coronary system. Primary outcome: (a) ST elevation resolution; (b) TIMI flow; (c) level of CKMB and troponin. Secondary outcome: (a) inhospital mortality; (b) duration of hospitalization; (c) hemodynamic stability; (d) electrical stability; (e)left ventricular ejection fraction.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2017062434621N1**
Registration date: **2017-08-05, 1396/05/14**
Registration timing: **prospective**

Last update:
Update count: **0**

Registration date

2017-08-05, 1396/05/14

Registrant information

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Recruitment status

Recruitment complete

Funding source

Vic-chancellor of Research and Technology, Hamadan University of Medical Sciences

Expected recruitment start date

2017-08-23, 1396/06/01

Expected recruitment end date

2018-04-21, 1397/02/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of prophylactic intracoronary Adenosine infusion during primary percutaneous coronary intervention in Acute ST Elevation Myocardial infarction

Public title

Effect of intracoronary Adenosine infusion during primary

percutaneous coronary intervention in Acute Myocardial infarction

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria: (a) ST elevation MI in ECG; (b) LAD and LCX lesion; (c) coronary lesion suitable for angioplasty; (d) TIMI flow 0-1. Exclusion criteria: (a) history of COPD or asthma; (b) patients who under treatment with dipyridamol; (c) Presentation with cardiogenic shock; (d) Patients who received fibrynolytic; (e) life expectancy less than 6 month; (f) stent thrombosis; (g) history of CABGs; (h) AV nodal block in first ECG; (I) TIMI flow 2-3 in angiography; (j) RCA lesion; (k) lack of patient satisfaction.

Age

No age limit

Gender

Both

Phase

3

Groups that have been masked

No information

Sample size

Target sample size: **104**

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

Local Human Subject Review Board

Street address

Hamadan University of Medical Sciences, Shaheed Fahmideh Ave, Hamadan

City

Hamadan

Postal code

6517838695

Approval date

2017-05-13, 1396/02/23

Ethics committee reference number

IR.UMSHA.REC.1396.133

Health conditions studied

1

Description of health condition studied

Acute myocardial infarction

ICD-10 code

I21

ICD-10 code description

Ischaemic heart diseases

Primary outcomes

1

Description

ST elevation resolution

Timepoint

Before and after intervention

Method of measurement

ECG

2

Description

TIMI flow

Timepoint

Before and after intervention

Method of measurement

Angioplasty

3

Description

level of CKMB and troponin

Timepoint

Before and after intervention

Method of measurement

Blood sample

Secondary outcomes

1

Description

Inhospital mortality

Timepoint

After intervention

Method of measurement

check list

2

Description

duration of hospitalization

Timepoint

After intervention

Method of measurement

check list

3

Description
hemodynamic stability
Timepoint
After intervention
Method of measurement
check list

4

Description
electrical stability
Timepoint
After intervention
Method of measurement
ECG

5

Description
Left ventricular ejection fraction
Timepoint
After intervention
Method of measurement
Echocardiography

Intervention groups

1

Description
Intervention group: Two separated doses of 40 microgram adenosine in 10 ml normal saline 0.9% intracoronary infusion during primary PCI on LAD or LCX.
Category
Prevention

2

Description
Control group: Two separated doses of Intracoronary 10 ml normal saline 0.9% infusion in left coronary system.
Category
Prevention

Recruitment centers

1

Recruitment center
Name of recruitment center
Farshchian Heart Center
Full name of responsible person
Behshad Naghshtabrizi
Street address
Farshchian Heart Center, Shaheed Fahmideh Ave.
City
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Vic-chancellor of Research and Technology, Hamadan University of Medical Sciences
Full name of responsible person
Saeid Bashirian
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Vic-chancellor of Research and Technology, Hamadan University of Medical Sciences, Shaheed Fahmideh Ave.
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Hamadan
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Vic-chancellor of Research and Technology, Hamadan 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
Clinical Research Development Unit of Farshchian Heart Center, Department of Cardiology
Full name of responsible person
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Person responsible for scientific inquiries

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Person responsible for updating data

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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