Clinical Trial Protocol
Iranian Registry of Clinical Trials

18 Sep 2026

Evluation of N-acetyl cystein on myocardial perfusion and plasma troponin I and hsCPR levels in patients undergoing primary PCI

Protocol summary

Summary

We designed this study to evaluate the effect of N-acetylcystein on biomarkers of coronary reperfusion and Troponin I as well as high sensitive C-Reactive Protein (hs-CRP) in patients undergoing percutaneous coronary intervention. Double blind randomized clinical trial on 100 patients in 2 groups (intervention & control) are selected. Patients with St-segment elevated myocardial infarction included. Patients were excluded if had: emergency for cardiac bypass ,cardiogenic shock or underwent rescue percutaneous coronary intervention . The patients in Intervention group were adminitered to take 100 mg/kg IV bolus N-acetylcystein and then intracoronary and 10mg/kg/h over 12 hours after percutaneous coronary intervention and patients in control group received standard regimens. Primary outcomes were Troponin I and hs-CRP measured before and 48 hours after percutaneous coronary intervention. Patients were assessed for coronary blood flow after percutaneous coronary intervention.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201301048698N8**
Registration date: **2013-01-19, 1391/10/30**
Registration timing: **registered_while_recruiting**

Last update:
Update count: **0**

Registration date

2013-01-19, 1391/10/30

Registrant information

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Name of organization / entity

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Recruitment status

Recruitment complete

Funding source

Tehran Heart Center, Tehran University of Medical Sciences

Expected recruitment start date

2012-02-01, 1390/11/12

Expected recruitment end date

2013-02-01, 1391/11/13

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Evluation of N-acetyl cystein on myocardial perfusion and plasma troponin I and hsCPR levels in patients undergoing primary PCI

Public title

NAC effects on patients with AMI undergoing angioplasty

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion Criteria:Myocardial infarction patients who were candidate of primary PCI . Exclusion Criteria:rescue pci; emergency for cardiac bypass ; cardiogenic shock; life expactancy less than 6 months; Age less than 18 years old; Uncontrolled hypertension; Thrombocytopenia; Malformation or aneurysm; sever chronic renal failure;

Sever liver failure; treatment with glycoprotein IIb/IIIa inhibitors during PCI ; sensitivity to sulfonamides ; Major surjery; Unsatisfactory to enter to study

Age

From **18 years** old to **90 years** old

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)

Triple blinded

Blinding description

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Tehran Heart Center

Street address

Jalal Ale Ahmad, North Karegar

City

Tehran

Postal code

Approval date

2012-08-13, 1391/05/23

Ethics committee reference number

586

Health conditions studied

1

Description of health condition studied

Myocardial Infarction

ICD-10 code

I21

ICD-10 code description

Acute Myocardial Infarction

Primary outcomes

1

Description

Troponin I

Timepoint

Baseline and after 48 hours

Method of measurement

Elisa Kit

2

Description

hs-CRP

Timepoint

Baseline and after 48 hours

Method of measurement

Elisa Kit

3

Description

Myocardial Perfusion

Timepoint

Baseline and after Primary Percutaneous Coronary Intervention

Method of measurement

Myocardial Blush Grage and TIMI flow

Secondary outcomes

empty

Intervention groups

1

Description

Intervention: The patients in Intervention group were adminitered to take 100 mg/kg IV bolus N-acetylcystein and then intracoronary and 10mg/kg/h over 12 hours after percutaneous coronary intervention

Category

Prevention

2

Description

Control: Received Standard treatment as for patients with acute myocardial infarction

Category

Other

Recruitment centers

1

Recruitment center

Name of recruitment center

Tehran Heart Center

Full name of responsible person

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Sponsors / Funding sources

1

Sponsor
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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
Tehran Heart Center, 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

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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