

Clinical Trial Protocol

Iranian Registry of Clinical Trials

07 Jul 2026

Evaluating the effect of N-acetyl cysteine on the Late Remodeling's Biomarkers and ecocargdiography parameters in patients following acute myocardial infarction

Protocol summary

Summary

The aim of this study was to evaluate the effect of N-acetylcystein on late remodeling biomarkers and echocardiographic findings in patients following acute myocardial infarction. This would be a prospective clinical trial conducted on 50 patients of both sexes with the diagnosis of STEMI. Those patients who became candidate of primary PCI will be included in this study. Therefore, all patients received thrombolytics would be excluded. One group of patients will be considered as control group and in the other group NAC with the dose of 100 mg/kg and then 10 mg/kg/hr for 12 hours will be administered. Remodeling biomarker (MMP-9) was measured at the arrival time and after a month. Echocardiographic evaluations will be conducted upon arrival and within a month. These findings will be compared between these two groups.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201211168698N3**
Registration date: **2012-12-14, 1391/09/24**
Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2012-12-14, 1391/09/24

Registrant information

Name

Azita Hajhossein Talasaz

Name of organization / entity

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Recruitment status

Recruitment complete

Funding source

Tehran University of Medical Sciences

Expected recruitment start date

2012-12-01, 1391/09/11

Expected recruitment end date

2013-11-01, 1392/08/10

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Evaluating the effect of N-acetyl cysteine on the Late Remodeling's Biomarkers and ecocargdiography parameters in patients following acute myocardial infarction

Public title

NAC effect on late remodeling

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 expectancy less than 6 months; Age less than 18 years old; Uncontrolled hypertension; Thrombocytopenia; Malformation or aneurysm; sever chronic renal failure;

Sever liver failure; sensitivity to sulfonamides ; Major surgery; Unsatisfactory to enter to study

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)

Triple blinded

Blinding description

Placebo

Used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Tehran University of Medical Sciences

Street address

Tehran University of Medical Sciences

City

Tehran

Postal code

Approval date

2012-11-14, 1391/08/24

Ethics committee reference number

19189

Health conditions studied

1

Description of health condition studied

Acute Myocardial Infarction

ICD-10 code

I21

ICD-10 code description

Acute Myocardial Infarction

Primary outcomes

1

Description

Echocardiography findings of remodeling (LVEDV)

Timepoint

Baseline and after a month

Method of measurement

Echocardiography

Secondary outcomes

1

Description

Level of MMP-9

Timepoint

Baseline and after a month

Method of measurement

Serum level-Elisa kit

Intervention groups

1

Description

Intervention: Bolus dose of NAC 100 mg/kg then 10 mg/kg/hr for 12 hours- During the intervention NAC will be administered intracoronary

Category

Treatment - Drugs

2

Description

Control group: Receive D5W in the same volume as NAC

Category

Placebo

Recruitment centers

1

Recruitment center

Name of recruitment center

Tehran Heart Center

Full name of responsible person

Azita Hajhossein Talasaz

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North Kargar St., Jalal Al Ahmand St.

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Tehran University of Medical Sciences

Full name of responsible person

Fatemeh Saeedi

Street address

Research Deputy, Tehran University of Medical Sciences, Qods St., Keshavarz Blv.

City
Tehran

Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?
Yes

Title of funding source
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
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Assistant Professor, Clinical Pharmacy Specialist

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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