

Clinical Trial Protocol

Iranian Registry of Clinical Trials

19 Sep 2026

The effect of minocycline on the post myocardial infarction left ventricular function in patients with ST-segment elevation myocardial infarction treated by primary percutaneous coronary intervention

Protocol summary

Summary

The main cause of left ventricular dysfunction and heart failure following myocardial infarction is left ventricular remodelling and the severity of these changes can predict mortality of the patients. experimental studies have shown that minocycline could predict left ventricular remodeling following myocardial infarction and can have a protective effect on myocardial ischemia/reperfusion. However, human studies are insufficient. This study is designed to investigate the effect of minocycline on left ventricular function following myocardial infarction in patients who referred to Tehran Heart Center. After obtaining demographic and clinical data, patients will be randomized to receive either minocycline or placebo based on the defined protocol. measurement of Serum levels of MMP-2 and 2D transthoracic echocardiography and 2D speckle tracking echocardiography will be performed within 48 hours following PCI and after 6 months to measure the tissue deformation indices. Then the study data will be compared between the study group. In this double-blinded randomized controlled clinical trial, 90 patients with ST-segment elevation myocardial infarction

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201411188698N15**
Registration date: **2015-06-22, 1394/04/01**
Registration timing: **na**

Last update:

Update count: **0**

Registration date

2015-06-22, 1394/04/01

Registrant information

Name

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Name of organization / entity

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

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Recruitment status

Not enough for processing

Funding source

Tehran Heart Center, Tehran university of Medical Sciences

Expected recruitment start date

2014-11-22, 1393/09/01

Expected recruitment end date

2014-05-22, 1393/03/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of minocycline on the post myocardial infarction left ventricular function in patients with ST-segment elevation myocardial infarction treated by primary percutaneous coronary intervention

Public title

The effect of minocycline on the post myocardial infarction left ventricular function in patients with ST-segment elevation myocardial infarction treated by

primary percutaneous coronary intervention

Purpose
Treatment

Inclusion/Exclusion criteria
inclusion criteria: 1- Diagnosis of STEMI (chest pain>30 minutes and <12 hr, ST segment elevation in electrocardiogram>1 mm in at least 2 consecutive leads) 2- No history of heart failure 3- Giving consent to enter the study 4- Age>20 and <65 years 5- Successful PCI
exclusion criteria: 1- History of myocardial infarction 2- History of cardiac surgery (either CABG or valvular surgery) 3- History of electrophysiological interventions (ablation or device implantation) 4- Presence of cardiogenic shock at the time of admission 5- Chronic diseases with poor survival (malignancy, etc.) 6- Cardiomyopathy or hereditary muscular diseases 7- Chronic renal or hepatic insufficiency 8- new onset left bundle branch block in ECG 9- candidate for antithrombotic therapy 10- Moderate to severe mitral regurgitation

Age
From **20 years** old to **65 years** old

Gender
Both

Phase
3

Groups that have been masked
No information

Sample size
Target sample size: **90**

Randomization (investigator's opinion)
Randomized

Randomization description

Blinding (investigator's opinion)
Double blinded

Blinding description

Placebo
Used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Tehran Heart Center

Street address

North Kargar Ave

City

Tehran

Postal code

1411713138

Approval date

2015-02-26, 1393/12/07

Ethics committee reference number

1393-12-A-008

Health conditions studied

1

Description of health condition studied

Acute myocardial infarction

ICD-10 code

I21

ICD-10 code description

myocardial infarction specified as acute or with a stated duration of 4 weeks (28 days) or less from onset

Primary outcomes

1

Description

Left ventricular function

Timepoint

Baseline (within 48 hours from PCI) and 6 months later

Method of measurement

Echocardiography

Secondary outcomes

1

Description

Diastolic function

Timepoint

Baseline (within 48 hours from PCI) and 6 months later

Method of measurement

Echocardiography

2

Description

Tissue doppler indices

Timepoint

Baseline (within 48 hours from PCI) and 6 months later

Method of measurement

Color Doppler Echocardiography

Intervention groups

1

Description

Minocycline 50 mg orally at baseline and then 50 mg daily for 5 days

Category

Treatment - Drugs

2

Description

Placebo in the form of the main drug orally at baseline and then daily for 5 days

Category

Placebo

Recruitment centers

1

Recruitment center

Name of recruitment center

Tehran Heart Center

Full name of responsible person

Mojtaba Salarifar

Street address

North Kargar st.

City

Tehran

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Tehran Heart Center

Full name of responsible person

Azita Hajhosein talasaz

Street address

North Kargar st

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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

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 Heart Center

Full name of responsible person

Alireza Nasiri

Position

Resident of cardiology

Other areas of specialty/work

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Person responsible for scientific inquiries

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Person responsible for updating data

Contact

Name of organization / entity

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Full name of responsible person

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MD, MSc

Other areas of specialty/work

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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