

Clinical Trial Protocol

Iranian Registry of Clinical Trials

12 Jul 2026

Comparing the protective effect of Ticaglerol versus Clopidogrel on Myocardial resistance index in patients with ST elevation myocardial infarction.

Protocol summary

Study aim

Comparing the protective effect of Ticaglerol versus Clopidogrel on Myocardial resistance index in patients with ST elevation myocardial infarction.

Design

this trial was performed in order to comparing the effect of clopidogrel versus ticagrelor in patients who arrived with STEMI in first 12 hours of symptoms onset and candidate for PPCI. the patients who refer to cath lab and the involvement of single vessel reported they will be enrolled. and they are randomized to two interventional and control groups. IMR was assess with QFR soft ware immediately after accomplish of procedure. and echocardiography will be performed in the first 24 hours and 3 months after the procedure.

Settings and conduct

this trial was performed as a randomization, open label, parallel arm in shahid rajaiee heart center

Participants/Inclusion and exclusion criteria

Inclusion criteria: more than 18 years old patients with STEMI Exclusion criteria: multivessel or left main disease, stent thrombosis, cardiogenic shock, history of CVA or MI, contraindication of adenosine, TIMI FLOW less than 3

Intervention groups

intervention group: prescribed 180 mg Ticagrelor control group: prescribed 600 mg clopidogrel

Main outcome variables

myocardial resistance index

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20170619034621N3**

Registration date: **2020-02-01, 1398/11/12**

Registration timing: **prospective**

Last update: **2020-02-01, 1398/11/12**

Update count: **0**

Registration date

2020-02-01, 1398/11/12

Registrant information

Name

Azadeh Mozayani Monfared

Name of organization / entity

Hamadan University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 81 3838 1731

Email address

a.mozayani@umsha.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2020-03-05, 1398/12/15

Expected recruitment end date

2020-11-21, 1399/09/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparing the protective effect of Ticaglerol versus Clopidogrel on Myocardial resistance index in patients with ST elevation myocardial infarction.

Public title

Ticagrelor in ST elevation MI

Purpose
Treatment

Inclusion/Exclusion criteria
Inclusion criteria:
age > 18 years presented with STEMI suitable infarcted related artery for angioplasty patient satisfaction
Exclusion criteria:
More than single vessel involvement in angiography unprotected leftmain lesion stent thrombosis presentation with cardiogenic shock history of CVA history of MI contraindication of adenosine High degree AV block TIMI flow < 3 at the end of the angioplasty patient dissatisfaction

Age
From **18 years** old

Gender
Both

Phase
2

Groups that have been masked
No information

Sample size
Target sample size: **35**

Randomization (investigator's opinion)
Randomized

Randomization description
Block randomization method with block size of 4 will be done

Blinding (investigator's opinion)
Not blinded

Blinding description

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Shahid rajaiee hospital
Street address
Hashemi rafsanjani highway
City
Tehran
Province
Tehran
Postal code
1995614331
Approval date
2020-01-25, 1398/11/05
Ethics committee reference number
IR.RHC.REC.1398.076

Health conditions studied

1

Description of health condition studied
Acut ST elevation myocardial infarction
ICD-10 code
I21
ICD-10 code description
ST elevation (STEMI) and non-ST elevation (NSTEMI) myocardial infarction

Primary outcomes

1

Description
intramyocardial resistance
Timepoint
immediately after procedure
Method of measurement
QFR software

Secondary outcomes

1

Description
left ventricle ejection fraction
Timepoint
during first 24 hours and 3 month after procedure
Method of measurement
echocardiography

2

Description
wall motion score index
Timepoint
during first 24 hours and 3 month after procedure
Method of measurement
echocardiography

Intervention groups

1

Description
Intervention group: prescribed 180 mg (two tablet) Ticagrelor orally as a loading dose before stent deployment in cath lab
Category
Treatment - Drugs

2

Description
Control group: prescribed 600 mg (8 tablet) clopidogrel orally as a loading dose before stent deployment in cath lab
Category
Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center

Shaheed Rajaie Heart Center

Full name of responsible person

Bahram Mohebi

Street address

Heshemi rafsanjani highway

City

Tehran

Province

Tehran

Postal code

1995614331

Phone

+98 21 23921

Email

azadeh_m27@yahoo.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice chancellor for research of Shahid Rajaiee Heart Center

Full name of responsible person

Bahram Mohebi

Street address

Hashemi rafsanjani highway

City

Tehran

Province

Tehran

Postal code

1995614331

Phone

+98 21 23921

Email

azadeh_m27@yahoo.com

Grant name

Grant code / Reference number

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

No

Title of funding source

-

Proportion provided by this source

100

Public or private sector

Public

Domestic or foreign origin

Domestic

Category of foreign source of funding

empty

Country of origin

Type of organization providing the funding

Academic

Person responsible for general inquiries

Contact

Name of organization / entity

Iran University of Medical Sciences

Full name of responsible person

Bahram Mohebi

Position

Assistant professor

Latest degree

Subspecialist

Other areas of specialty/work

Cardiology

Street address

Hashemi rafsanjani highway

City

Tehran

Province

Tehran

Postal code

1995614331

Phone

+98 21 23921

Email

roodbar@yahoo.com

Person responsible for scientific inquiries

Contact

Name of organization / entity

Iran University of Medical Sciences

Full name of responsible person

Bahram Mohebi

Position

Assistant professor

Latest degree

Subspecialist

Other areas of specialty/work

Medical Education

Street address

Hashemi rafsanjani highway

City

Tehran

Province

Tehran

Postal code

1995614331

Phone

+98 21 23921

Email

roodbar@yahoo.com

Person responsible for updating data

Contact

Name of organization / entity

Iran University of Medical Sciences

Full name of responsible person

Azadeh Mozayanimonfared

Position

interventional cardiology resident

Latest degree
Subspecialist
Other areas of specialty/work
Cardiology
Street address
Hashemi rafsanjani Highway
City
Tehran
Province
Tehran
Postal code
1995614331
Phone
+98 21 23921
Email
a.mozayani@umsha.ac.ir

Sharing plan

Deidentified Individual Participant Data Set (IPD)

Yes - There is a plan to make this available

Study Protocol

Yes - There is a plan to make this available

Statistical Analysis Plan

Yes - There is a plan to make this available

Informed Consent Form

Yes - There is a plan to make this available

Clinical Study Report

Yes - There is a plan to make this available

Analytic Code

Undecided - It is not yet known if there will be a plan to make this available

Data Dictionary

Yes - There is a plan to make this available

Title and more details about the data/document

patient demographic data and the primary and secondary endpoint data

When the data will become available and for how long

no limitation

To whom data/document is available

all persons

Under which criteria data/document could be used

no limitation

From where data/document is obtainable

connect with email:a.mozayani@umsha.ac.ir or research center of Shaheed rajaiee hospitsl

What processes are involved for a request to access data/document

after receiving the request for accessibility to data,it was reviewing with research expert and then referred to the master of research

Comments