Clinical Trial Protocol
Iranian Registry of Clinical Trials

18 Sep 2026

The effect of acetaminophen on ischemia- reperfusion injery in patients with ST segment elevation acute myocardial infarction treated by primary percutaneous coronary intervention

Protocol summary

Summary

The aim of the current study was to determine the effect of acetaminophen on ischemia- reperfusion injery in patients with ST segment elevation acute myocardial infarction(STEMI) treated by primary percutaneous coronary intervention (pPCI). This study is a double blind randomized clinical trial which its population is all of the patients with STEMI diagnosis. Inclusion criteria include: patient willingness to take part in the study, informed consent, age above 20 and below 65 years and include all patients with STEMI. Exclusion criteria included a history of kidney and liver disease, acute hepatitis, asthma, pregnancy, cardiac output less than 30%, history of heart failure, and consumption of acetaminophen, warfarin, salicylates, barbiturates, carbamazepine, hydantoin and rifampin, rifabutin, isoniazid, alcohol, and antioxidants drugs. A total of 60 patients will be selected among those eligible. Patients were randomly divided in two groups. Before the angioplasty case group receive 1 grams of paracetamol, and then patient hemodynamic parameters and blood biomarker will be checked before and 6 hours after p PCI. Also in order to measure the amount of cellular damage, blood sample will be taken from the coronary of heart before and after p PCI, and in order to evaluate the levels of homocysteine, glutathione and malondialdehyde serum of blood will be kept at -20 C.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2017011828454N3**
Registration date: **2017-02-11, 1395/11/23**
Registration timing: **registered_while_recruiting**

Last update:
Update count: **0**

Registration date

2017-02-11, 1395/11/23

Registrant information

Name

Atefeh Asadmobini

Name of organization / entity

Kermanshah University of Medical Science, Cardiovascular Research Centre

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Recruitment status

Recruitment complete

Funding source

Kermanshah University of Medical Scince

Expected recruitment start date

2017-02-03, 1395/11/15

Expected recruitment end date

2017-08-06, 1396/05/15

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of acetaminophen on ischemia- reperfusion injery in patients with ST segment elevation acute myocardial infarction treated by primary percutaneous coronary intervention

Public title

The effect of acetaminophen on ischemia- reperfusion injery in patients with ST segment elevation acute myocardial infarction treated by primary percutaneous coronary intervention

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria include: patient willingness to take part in the study, informed consent, age above 20 and below 65 years and include all patients with STEMI. Exclusion criteria included a history of kidney and liver disease, acute hepatitis, asthma, pregnancy, cardiac output less than 30%, history of heart failure, and consumption of acetaminophen, warfarin, salicylates, barbiturates, carbamazepine, hydantoin and rifampin, rifabutin, isoniazid, alcohol, and antioxidants drugs.

Age

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

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **60**

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Double blinded

Blinding description

Placebo

Not used

Assignment

Single

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Kermanshah University of medical Sciences

Street address

Vice Chancellor for Research and Technology- Building No. 2- Kermanshah University of medical Sciences-

City

Kermanshah

Postal code

Approval date

2016-12-28, 1395/10/08

Ethics committee reference number

561

Health conditions studied

1

Description of health condition studied

ST segment elevation acute myocardial infarction

ICD-10 code

I21

ICD-10 code description

Acute myocardial infarction

Primary outcomes

1

Description

homocysteine

Timepoint

Before and after primaryprecutanous coronary intervention

Method of measurement

Measuring the level of homocysteine in coronary blood sample

2

Description

Glutathione

Timepoint

Before and after primaryprecutanous coronary intervention

Method of measurement

Measuring the level of Glutathionein coronary blood sample

3

Description

Malondialdehyde

Timepoint

Before and after primaryprecutanous coronary intervention

Method of measurement

Measuring the level of malondialdehydecoronary blood sample

Secondary outcomes

1

Description

LDH

Timepoint

Before and six hours after primary precutaneous coronary intervention

Method of measurement

Measuring the level of LDH from peripheral blood serum

2

Description

Troponine

Timepoint
Before and six hours after primary precutaneous coronary intervention
Method of measurement
Measuring the level of troponinefrom peripheral blood serum

3

Description
CPK-mb
Timepoint
Before and six hours after primary precutaneous coronary intervention
Method of measurement
Measuring the level of CPK-mb from peripheral blood serum

4

Description
CPK
Timepoint
Before and six hours after primary precutaneous coronary intervention
Method of measurement
Measuring the level of CPK from peripheral blood serum

Intervention groups

1

Description
Case group receive 1 gram paracetamol before primary percutaneous coronary intervention
Category
Treatment - Drugs

Recruitment centers

1

Recruitment center
Name of recruitment center
Imam Ali Hospital
Full name of responsible person
Street address
City
Kermanshah

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Vice Chancellor for Research and Technology, Kermanshah University of Medical Sciences
Full name of responsible person
Dr Behrooz Hamzeh
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Vice Chancellor for Research and Technology of Kermanshah University of Medical Sciences- Building No. 2 - shheed Beheshti Blvd
City
Kermanshah
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Vice Chancellor for Research and Technology, Kermanshah 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
Kermanshah University of medical Science
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Person responsible for updating data

Contact

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