Clinical Trial Protocol
Iranian Registry of Clinical Trials

17 Sep 2026

Determination of the Role of Oxygen in Suspected Acute Myocardial Infarction by Biomarkers

Protocol summary

Study aim
Determination of the Role of Oxygen in Suspected Acute Myocardial Infarction by Biomarkers
Design
This study is a clinical trial with control group and double blind randomized parallel groups in which 352 eligible patients will be randomly assigned to intervention and control groups
Settings and conduct
Patients with ACS referred to Golestan and Imam Khomeini hospitals will be included in the study if eligible
Participants/Inclusion and exclusion criteria
Patients with acute myocardial infarction
Intervention groups
First group: receive O2 as interventional medication
Second group: receive environmental air as placebo
Main outcome variables
Cardiac bio-markers (in our study troponin), as the most important indicator of our study, will be measured at 2 locations

General information

Reason for update
Acronym
IRCT registration information
IRCT registration number: **IRCT20190922044850N1**
Registration date: **2019-10-10, 1398/07/18**
Registration timing: **retrospective**

Last update: **2019-10-10, 1398/07/18**
Update count: **0**
Registration date
2019-10-10, 1398/07/18

Registrant information
Name
Ehsan Kiani
Name of organization / entity
Country
Iran (Islamic Republic of)
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+98 61 3227 5806
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Recruitment status
Recruitment complete
Funding source

Expected recruitment start date
2019-03-21, 1398/01/01
Expected recruitment end date
2019-06-21, 1398/03/31
Actual recruitment start date
2019-03-21, 1398/01/01
Actual recruitment end date
2019-06-21, 1398/03/31
Trial completion date
2019-08-23, 1398/06/01

Scientific title
Determination of the Role of Oxygen in Suspected Acute Myocardial Infarction by Biomarkers

Public title
the Role of Oxygen in Suspected Acute Myocardial Infarction
Purpose
Supportive
Inclusion/Exclusion criteria
Inclusion criteria:
Presence of ACS (Acute coronary syndrome) in patients Lack of O2 intake in other centers Lack of history of Heart Failure Lack of history of COPD (Chronic obstructive pulmonary disease) Lack of history of respiratory diseases
Exclusion criteria:
Need for Inotropic agents So2 less than 90% Dissatisfaction Admission less than 6 hours in hospital

Unstable vital signs

Age

No age limit

Gender

Both

Phase

N/A

Groups that have been masked

- Participant
- Care provider
- Investigator
- Outcome assessor

Sample size

Target sample size: **350**

Actual sample size reached: **352**

Randomization (investigator's opinion)

Not randomized

Randomization description

Blinding (investigator's opinion)

Double blinded

Blinding description

According to the blinded study, neither the researcher nor the patients would know the type of gas received, the study was double-blind.

Placebo

Used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics commette of AJUMS

Street address

No 10, 20 Eghbal Ave, Kourosh, Ahwaz, khouzestan, Iran

City

Ahwaz

Province

Khouzestan

Postal code

46416164

Approval date

2018-09-17, 1397/06/26

Ethics committee reference number

IR.AJUMS.REC.1397.397

Health conditions studied

1

Description of health condition studied

Determination of the Role of Oxygen in Suspected Acute Myocardial Infarction by Biomarkers

ICD-10 code

I21.9

ICD-10 code description

Acute myocardial infarction, unspecified

Primary outcomes

1

Description

Troponin

Timepoint

On arrival and 4-6 hours after the patients arrive at the emergency department

Method of measurement

Blood sample

2

Description

LVEF(Left Ventricular Ejection Fraction)

Timepoint

On arrival and 4-6 hours after the patients arrive at the emergency department

Method of measurement

Eco cardiography

3

Description

arrhythmia

Timepoint

On arrival and 4-6 hours after the patients arrive at the emergency department

Method of measurement

ECG (Electrocardiogram)

4

Description

heart pain

Timepoint

On arrival and 4-6 hours after the patients arrive at the emergency department

Method of measurement

Asking the patient

5

Description

Opioid drugs

Timepoint

On arrival and 4-6 hours after the patients arrive at the emergency department

Method of measurement

Based on the mg prescribed

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: Patients with ACS referred to Golestan and Imam Khomeini teaching hospitals of Ahwaz with inclusion criteria who will be given oxygen by nasal method for 4-6 hours at 4-6 liters / min and According to the blinding done, neither the researcher nor the patients will know the type of gas received.
Category
Diagnosis

2

Description
Control group: control group:Patients with ACS referred to Golestan and Imam Khomeini teaching hospitals of Ahwaz with inclusion criteria who will be given Room air by nasal method for 4-6 hours at 4-6 liters / min and According to the blinding done, neither the researcher nor the patients will know the type of gas received.
Category
Diagnosis

Recruitment centers

1

Recruitment center
Name of recruitment center
Hospital golestan university
Full name of responsible person
Ehsan Kiani
Street address
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2

Recruitment center
Name of recruitment center
Imam Khomeini Hospital of Ahwaz
Full name of responsible person
Ehsan Kiani
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mam Khomein hospital, Azadegan Street, Ahwaz
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Ahvaz University of Medical Sciences
Full name of responsible person
Mohammad Badvi
Street address
No 10, 20 Eghbal Ave, Kourosh, Ahwaz, khouzestan, Iran
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Postal code
46416164
Phone
+98 61 3336 2414
Email
info@ajums.ac.ir
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Ahvaz University of Medical Sciences
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
Ahvaz University of Medical Sciences
Full name of responsible person
Ehsan Kiani
Position
resident
Latest degree
Medical doctor
Other areas of specialty/work
Cardiology
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Position
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Person responsible for updating data

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Sharing plan

Deidentified Individual Participant Data Set (IPD)
Undecided - It is not yet known if there will be a plan to make this available

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

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

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

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