Clinical Trial Protocol
Iranian Registry of Clinical Trials

07 Nov 2026

Evaluation of the effects of epinephrine on the treatment of COVID-19 pneumonia: a randomized clinical trial

Protocol summary

Study aim
Evaluation of the effect of nebulized and endotracheal epinephrine in the treatment of Covid-19 pneumonia

Design
A phase 2-3, placebo-controlled, paralleled, single-blind, randomized clinical trial, 84 patients

Settings and conduct
This study will be conducted at the Shahid Mohammadi Hospital and Khalij e Fars Hospital, Hormozgan, Bandar Abbas. The study population is 84 patients with COVID-19 (42 patients in treatment group and 42 in placebo group).

Participants/Inclusion and exclusion criteria
Inclusion criteria: Age between 18 and 80 years, Positive polymerase chain reaction (PCR) test for COVID-19, Hospitalized, and Signing informed consent and willingness of study participant to accept randomization to any assigned treatment. Exclusion criteria: Contraindications epinephrine including, hemorrhagic CVA, TIA, and acute MI, Heart rate > 100, History of allergy to epinephrine, Pregnancy, and breastfeeding.

Intervention groups
Treatment group will receive the intratracheal epinephrine for intubated patients, and nebulizer form of epinephrine for non-intubated patients at a dose of 200 micrograms three times a day for five days, in addition to the standard treatment. Placebo group will receive distilled water for intubated patients and non-intubated patients at a same volume three times a day for five days, in addition to the standard treatment.

Main outcome variables
Checking the clinical symptoms, O2 saturation, Evaluation of pulmonary imaging, Occurrence of adverse drug reactions

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20200506047323N8**
Registration date: **2021-05-24, 1400/03/03**
Registration timing: **prospective**

Last update: **2021-05-24, 1400/03/03**
Update count: **0**

Registration date
2021-05-24, 1400/03/03

Registrant information

Name
Mohammad Fathalipour

Name of organization / entity

Country
Iran (Islamic Republic of)

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+98 76 3371 0406

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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2021-06-05, 1400/03/15

Expected recruitment end date
2021-09-21, 1400/06/30

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
Evaluation of the effects of epinephrine on the treatment of COVID-19 pneumonia: a randomized clinical trial

Public title

epinephrine in COVID-19

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Age between 18 and 80 years Positive polymerase chain reaction (PCR) test for COVID-19 Hospitalized Signing informed consent and willingness of study participant to accept randomization to any assigned treatment a

Exclusion criteria:

Contraindications epinephrine including, hemorrhagic CVA, TIA, and acute MI Heart rate > 100 History of allergy to epinephrine Pregnancy and breastfeeding

Age

From **18 years** old to **80 months** old

Gender

Both

Phase

2-3

Groups that have been masked

- Participant

Sample size

Target sample size: **84**

Randomization (investigator's opinion)

Randomized

Randomization description

Block randomization will be performed (each block consists 6 patients). Allocation sequence and concealment codes will be generated using www.sealedenvelope.com. The closed envelope method will be used to hide the allocation sequence.

Blinding (investigator's opinion)

Single blinded

Blinding description

The epinephrine and placebo will be coded by the project manager. Patients will be randomly allocated within the blocks based on the hidden codes. Only study participants will be blind to the intervention and studied groups. However, physicians and nurses who evaluate the outcomes will be aware of the codes.

Placebo

Used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Hormozgan University of Medical Sciences

Street address

Jomhuri Eslami Blvd

City

Bandar Abbas

Province

Hormozgan

Postal code

7919915519

Approval date

2021-01-10, 1399/10/21

Ethics committee reference number

IR.HUMS.REC.1399.488

Health conditions studied

1

Description of health condition studied

COVID-19, virus identified

ICD-10 code

U07.1

ICD-10 code description

COVID-19, virus identified

Primary outcomes

1

Description

Clinical symptoms

Timepoint

Before intervention and daily during the study

Method of measurement

Questionnaire

2

Description

Oxygen saturation

Timepoint

Before intervention and daily during the study

Method of measurement

Pulse oximeter

3

Description

Pulmonary imaging finding

Timepoint

Before intervention and the fifth day of the study

Method of measurement

Computed tomography

Secondary outcomes

1

Description

Incidence of serious adverse events

Timepoint

Before intervention and daily during the study

Method of measurement

Questionnaire

Intervention groups

1

Description
Intervention group: The standard treatment for COVID-19 based on the Ministry of Health's protocol plus intratracheal epinephrine for intubated patients, and nebulizer form of epinephrine for non-intubated patients at a dose of 200 micrograms three times a day for five days.
Category
Treatment - Drugs

2

Description
Control group: The standard treatment for COVID-19 based on the Ministry of Health's protocol plus intratracheal or nebulizer distilled water at a same volume three times a day for five days.
Category
Placebo

Recruitment centers

1

Recruitment center
Name of recruitment center
Shahid Mohammadi Hospital
Full name of responsible person
Parivash Davoodian
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2

Recruitment center
Name of recruitment center
Khalij e Fars Hospital
Full name of responsible person
Bibi Mona Razavi
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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
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Email
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Web page address
http://hums.ac.ir/
Grant name
Grant code / Reference number
990551
Is the source of funding the same sponsor organization/entity?
No
Title of funding source
Bandare-abbas 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
Bandare-abbas University of Medical Sciences
Full name of responsible person
Parivash Davoodian

Position
Associate professor
Latest degree
Specialist
Other areas of specialty/work
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Person responsible for updating data

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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
Undecided - It is not yet known if there will be a plan to make this available
Clinical Study Report
Not applicable
Analytic Code
Not applicable
Data Dictionary
Undecided - It is not yet known if there will be a plan to make this available
Title and more details about the data/document
Information regarding the study outcomes will be shared
When the data will become available and for how long
Data will become available after publication of obtained results
To whom data/document is available
Only academic institutions
Under which criteria data/document could be used
The study protocol or proposal should be approved by Ethics committee of institutions. The rights of authors and sponsors should be respected.
From where data/document is obtainable
M.fathalipour@yahoo.com
What processes are involved for a request to access data/document
Requests should be addressed to the Technology and Research Vice-chancellery of Hormozgan University of Medical Sciences and the project executor should informed
Comments