

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 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)

Phone

+98 76 3371 0406

Email address

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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

Bandare-abbas University of Medical Sciences

Full name of responsible person

Teamur Aghamolaei

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Email

mail@hums.ac.ir

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

Infectious diseases

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Other areas of specialty/work

Medical Pharmacy

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Person responsible for scientific 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

Infectious diseases

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Person responsible for updating data**Contact****Name of organization / entity**

Bandare-abbas University of Medical Sciences

Full name of responsible person

Mohammad Fathalipour

Position

Consultant

Latest degree

Ph.D.

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 be informed

Comments