

Clinical Trial Protocol

Iranian Registry of Clinical Trials

19 Jun 2026

Study of intra-venous ozonated auto-hemotherapy on severe cases of COVID-19: A randomized clinical trial

Protocol summary

Study aim

Study of the effect of ozonated autohemotherapy in patients with severe covid-19

Design

A randomized open-label clinical trial with parallel intervention and control groups and 30 patients in each group.

Settings and conduct

This study will be done in Razi Hospital, Ahvaz, Iran. The control group will received only standard treatment and intervention group will received ozonated autohemotherapy in addition to standard treatment. This study will be open-labeled.

Participants/Inclusion and exclusion criteria

Inclusion criteria: Severe cases of Covid-19 with chest CT changes in the form of peripheral uni- or bilateral ground glass opacity(s) in combination with any of the below: RR greater than 24, O2 Sat less than 93%, BP less than 90/60, decreased level of consciousness. Exclusion criteria: Coagulopathies and thrombocytopenia, history of seizure, hypothyroidism, pancreatitis, Hemophilias, acute alcohol poisoning, pregnancy and breast feeding, allergy to ozone or ozonated products.

Intervention groups

The intervention group will receive the Iranian national protocol treatment of Covid-19 (which include any of the following, Hydroxychloroquine or Chlroquine Phosphate, Lopinavir-Ritonavir, Atazanavir-Ritanavir, IFN β -1a, IFN β -1b, Dexamethasone, Heparin or Enoxaparin) in addition to a thrice weekly ozonated auto-hemotherapy: 200cc blood taken from the patient is mixed with 40cc of 30 μ g/mL ozone for 5 min then transfused back to the patient over 15 min. The control group only receive the Iranian national protocol for treatment of Covid-19.

Main outcome variables

Length of hospital stay, need for ICU, duration of ICU stay, case fatality rate, ESR, CRPq, need for mechanical ventilation, duration of mechanical ventilation, changes in chest CT.

General information

Reason for update

We were faced with a prolongation in completion of servicing the ozonating device, therefore we postponed the patient admission process; in the meantime we added a supplementary explanation to the methods section in order better introduce the procedure to the reader unfamiliar with ozonating processes. Furthermore we decided to add to the secondary outcomes and increased the age upper limit from 70 to 75, the latter being due to a down-sloping of Covid19 patient prevalence in our province.

Acronym

IRCT registration information

IRCT registration number: **IRCT20200616047792N1**
Registration date: **2020-08-03, 1399/05/13**
Registration timing: **prospective**

Last update: **2020-08-16, 1399/05/26**

Update count: **1**

Registration date

2020-08-03, 1399/05/13

Registrant information

Name

Behnam Sheibani

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 61 3392 5312

Email address

behnamshei@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2020-08-18, 1399/05/28

Expected recruitment end date

2020-09-20, 1399/06/30

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Study of intra-venous ozonated auto-hemotherapy on severe cases of COVID-19: A randomized clinical trial

Public title

A study of therapeutic effect of blood ozone therapy of severe Covid-19 patients

Purpose

Treatment

Inclusion/Exclusion criteria**Inclusion criteria:**

Severe cases of Covid-19 with chest CT changes in the form of peripheral uni- or bilateral ground glass opacity(s) in combination with any of the below: RR greater than 24, O2 Sat less than 93%, BP less than 90/60, decreased level of consciousness.

Exclusion criteria:

G6PD Deficiency Coagulopathies and thrombocytopenia
Hx of seizure Hypothyroidism Pancreatitis Hemophilias
Acute alcohol poisoning Pregnancy and breast feeding
Allergy to ozone and ozonated products

Age

From **18 years** old to **75 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

Block randomization using
<https://www.sealedenvelope.com/>

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**

Ethics committee of Ahvaz Jundishapur University of Medical Sciences

Street address

Golestan Blvd, Ahvaz, Iran

City

Ahvaz

Province

Khuzestan

Postal code

6135715794

Approval date

2020-06-06, 1399/03/17

Ethics committee reference number

IR.AJUMS.REC.1399.217

Health conditions studied**1****Description of health condition studied**

Covid-19

ICD-10 code

U07.1

ICD-10 code description

virus identified, Clinically-epidemiologically diagnosed COVID-19

Primary outcomes**1****Description**

length of hospital stay

Timepoint

Daily since the time of hospitalization

Method of measurement

patient's file

Secondary outcomes**1****Description**

Need for ICU

Timepoint

Daily since hospitalization

Method of measurement

Patient's file

2**Description**

Duration of ICU stay

Timepoint

Daily since ICU stay

Method of measurement

Patient's file

3

Description

Need for mechanical ventilation

Timepoint

Daily since hospitalization

Method of measurement

Patient's file

4

Description

Duration of need for mechanical ventilation

Timepoint

Daily since mechanical ventilation

Method of measurement

Patient's file

5

Description

Case fatality rate

Timepoint

Daily since intervention

Method of measurement

Patient's file

6

Description

C-reactive protein

Timepoint

Thrice weekly

Method of measurement

Biochemistry method

7

Description

White blood cell count

Timepoint

Thrice weekly

Method of measurement

Cell counter

8

Description

Change in lung CT scan appearance

Timepoint

End of week one and week two

Method of measurement

Chest spiral CT scan

9

Description

ESR

Timepoint

Thrice weekly

Method of measurement

Biochemistry method

Intervention groups

1

Description

Control group: This group will receive the Iranian nationally implemented treatment protocol of Covid-19, which include any of the following, Hydroxychloroquine 200mg po BD or Chloquine Phosphate 250mg po BD, Lopinavir-Ritonavir po 400-100mg BD, Atazanavir-Ritonavir 100-300mg po daily, IFN β -1a 44mcg sc EOD for 5-7 doses, IFN β -1b 250mcg sc EOD for 5-7 doses, Dexamethasone 8mg iv daily for ten days, Heparin 5000 u sc TDS or Enoxaparin 60u sc daiy.

Category

Treatment - Other

2

Description

Intervention Group: In the intervention group in addition to the Iranian nationally implemented protocol of Covid-19 treatment (which include any of the following, Hydroxychloroquine 200mg po BD or Chloquine Phosphate 250mg po BD, Lopinavir-Ritonavir po 400-100mg BD, Atazanavir-Ritonavir 100-300mg po daily, IFN β -1a 44mcg sc EOD for 5-7 doses, IFN β -1b 250mcg sc EOD for 5-7 doses, Dexamethasone 8mg iv daily for ten days, Heparin 5000 u sc TDS or Enoxaparin 60u sc daiy) will receive a thrice weekly -up to two weeks- of ozonization of 200 cc of patient blood drawn and mixed with three 40ml draws (equivalent to 120ml) of 30 μ g/mL of ozone gas over 5 min which is then transfused back into patient's blood stream over15 minutes.

Category

Treatment - Other

Recruitment centers

1

Recruitment center**Name of recruitment center**

Razi Hospital

Full name of responsible person

Dr. Behnam Sheibani

Street address

Felestin Blvd, Ahvaz

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Khouzestan

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Email

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Web page address

<https://hrazi.ajums.ac.ir/en-US/hrazi.ajums.ac/4856/page/Ahwaz-Razi-Hospital>

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Ahvaz University of Medical Sciences

Full name of responsible person

Dr. Mohammad Badavi

Street address

Golestan Blvd, Ahvaz

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Phone

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Email

dr.mohammadbedoui@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

Behnam Sheibani

Position

Resident

Latest degree

Medical doctor

Other areas of specialty/work

Infectious diseases

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Person responsible for scientific inquiries

Contact

Name of organization / entity

Ahvaz University of Medical Sciences

Full name of responsible person

Shokrollah Salmanzadeh Ramhormozi

Position

Assistant 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

Ahvaz University of Medical Sciences

Full name of responsible person

Behnam Sheibani

Position

Resident

Latest degree

Medical doctor

Other areas of specialty/work

Infectious diseases

Street address

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Phone

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Fax**Email**

behnamshei@gmail.com

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

Yes - There is 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

All related data will be provided upon completion of the study after disidentified IPD

When the data will become available and for how long

The related data will be indefinitely provided upon completion of the study.

To whom data/document is available

The related data will be provided to all interested upon completion of the study.

Under which criteria data/document could be used

On the condition that if any of the study methods (including study design and implementation method, measurement methods, etc.) are used the copyright law be observed and our study be cited.

From where data/document is obtainable

This will be provided upon completion of the study.

Contact: behnamshei@gmail.com

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

Contact via email: behnamshei@gmail.com

Comments