Clinical Trial Protocol
Iranian Registry of Clinical Trials

21 May 2022

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 30µg/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
Khouzestan
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 Chlroquine Phosphate 250mg po BD, Lopinavir-Ritonavir po 400-100mg BD, Atazanavir-Ritanavir 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 Chlroquine Phosphate 250mg po BD, Lopinavir-Ritonavir po 400-100mg BD, Atazanavir-Ritanavir 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 30µg/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
City
Ahvaz
Province
Khouzestan
Postal code
61965114941
Phone
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Email
behnamshei@gmail.com
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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Khouzestan
Postal code
6135715794
Phone
+98 61 3373 8383
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
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Infectious diseases
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Felestin Blvd, Ahvaz
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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
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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