

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

18 Sep 2026

### Efficacy of Blood Purification Techniques on Acute Respiratory Distress Syndrome (ARDS) in COVID-19 Pneumonia

#### Protocol summary

##### Study aim

Using blood purification techniques for remove cytokines induced ARDS

##### Design

In this one-center study, we will perform 12 confirmed cases of 2019-nCoV at Masih Daneshvari Hospital in Tehran, Tehran, and cases where 2019-nCoV will be confirmed by RT-PCR using blood purification methods, patients in two groups CRRT / Hemoperfusion + CRRT(Continuous Renal Replacement Therapy) will be divided and their mortality rates will be compared

##### Settings and conduct

Patients hospitalized in the intensive care unit who did not respond to normal treatment and had high interleukin 6 will be treated with CRRT three times with CRRT in the intensive care unit, and the other group will be treated with hemodialysis and CRRT three times.

##### Participants/Inclusion and exclusion criteria

Patients in the intensive care unit Patients with pao2.fio2 below 150 interleukin above 100 pg / ml Age over 18 years

##### Intervention groups

The first intervention group used CRRT three times a week in patients admitted to the treatment plan after reviewing the study selection criteria, the duration of each CRRT session, twenty-four hours, and then the measurement of interleukin six on days one and six. And seven after CRRT The second intervention group Use of HP.CRRT three times a week in patients admitted to the treatment plan after reviewing the study selection criteria, the duration of each HP.CRRT session, twenty-four hours, and then measuring interleukin six on days one and Six and seven after performing HP.CRRT

##### Main outcome variables

mortality

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20150107020592N29**

Registration date: **2020-06-21, 1399/04/01**

Registration timing: **retrospective**

Last update: **2020-06-21, 1399/04/01**

Update count: **0**

##### Registration date

2020-06-21, 1399/04/01

##### Registrant information

##### Name

Seyed Mohammad Reza Hashemian

##### Name of organization / entity

##### Country

Iran (Islamic Republic of)

##### Phone

+98 21 2610 9944

##### Email address

iran.criticalcare@yahoo.com

##### Recruitment status

##### Recruitment complete

##### Funding source

##### Expected recruitment start date

2020-03-20, 1399/01/01

##### Expected recruitment end date

2020-05-21, 1399/03/01

##### Actual recruitment start date

2020-03-20, 1399/01/01

##### Actual recruitment end date

2020-05-21, 1399/03/01

##### Trial completion date

2020-05-21, 1399/03/01

##### Scientific title

Efficacy of Blood Purification Techniques on Acute Respiratory Distress Syndrome (ARDS) in COVID-19 Pneumonia

**Public title**

Efficacy of Blood Purification Techniques on COVID-19 Pneumonia

**Purpose**

Treatment

**Inclusion/Exclusion criteria****Inclusion criteria:**

covid-19 patients PaO2/FiO2 ratio (partial pressure of arterial oxygen/fraction of inspired oxygen) under 150  
Interloquin 6 above 100 pg/ml

**Exclusion criteria:**

Patients under 18 years of age

**Age**

From **18 years** old

**Gender**

Both

**Phase**

3

**Groups that have been masked**

*No information*

**Sample size**

Target sample size: **12**

Actual sample size reached: **12**

**Randomization (investigator's opinion)**

N/A

**Randomization description****Blinding (investigator's opinion)**

Not blinded

**Blinding description****Placebo**

Not used

**Assignment**

Single

**Other design features****Secondary Ids**

empty

**Ethics committees****1****Ethics committee****Name of ethics committee**

Ethics committee of Masih Daneshvari Hospital the  
Educational , Research and Treatment center

**Street address**

End of Niavaran, Darabadational , Research and  
Treatment center.

**City**

Tehran

**Province**

Tehran

**Postal code**

1956944413

**Approval date**

2020-03-10, 1398/12/20

**Ethics committee reference number**

IR.SBMU.NRITLD.REC.1399.011

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

covid-19 patients

**ICD-10 code**

U07.1

**ICD-10 code description**

COVID-19 Disease

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

oxygenation

**Timepoint**

Daily after the procedure until discharge or death

**Method of measurement**

pulse Oximetry

**2****Description**

Mortality

**Timepoint**

discharge time

**Method of measurement**

Death

**3****Description**

Interleukin 6

**Timepoint**

Measurement of interleukin at intervals of one, six and  
seven days

**Method of measurement**

laboratory kit

**Secondary outcomes**

empty

**Intervention groups****1****Description**

Intervention group: : Use of Continuous Renal  
Replacement Therapy with anti-complement filter with  
crrt system, three times a week in patients admitted to  
the treatment plan after reviewing the study selection  
criteria, the duration of each CRRT session, twenty-four  
hours, and then measuring interleukin six on days one,  
six, and seven. From CRRT

**Category**

Treatment - Devices

## 2

### Description

Intervention group: Use of Hemoperfusion three times a week in patients admitted to the treatment plan after reviewing the study selection criteria, the duration of each Hemoperfusion session, twenty-four hours, and then measuring interleukin six on days one, six, and seven. From Hemoperfusion

### Category

Treatment - Devices

## Recruitment centers

### 1

#### Recruitment center

##### Name of recruitment center

Masih Daneshvari Hospital

##### Full name of responsible person

Seyyed Mohammadreza Hashemian

##### Street address

Masih Daneshvari Hospital, Darabad, Niavaran Sq,  
Tehran, Iran

##### City

Tehran

##### Province

Tehran

##### Postal code

1956944413

##### Phone

+98 21 2712 2265

##### Email

iran.criticalcare@yahoo.com

## Sponsors / Funding sources

### 1

#### Sponsor

##### Name of organization / entity

Shahid Beheshti University of Medical Sciences

##### Full name of responsible person

Dr Seyyad Mohammadreza Hashemian

##### Street address

End of Niavaran Darabad

##### City

Tehran

##### Province

Tehran

##### Postal code

1956944413

##### Phone

+98 21 2610 9512

##### Email

iran.criticalcare@yahoo.com

##### Grant name

##### Grant code / Reference number

##### Is the source of funding the same sponsor organization/entity?

Yes

##### Title of funding source

Shahid Beheshti 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

Shahid Beheshti University of Medical Sciences

##### Full name of responsible person

Seyed Mohammad reza Hashemian

##### Position

Professor

##### Latest degree

Subspecialist

##### Other areas of specialty/work

Anesthesiology

##### Street address

Masih Daneshvari Hospital, Darabad, Niavaran Sq,  
Tehran, Iran

##### City

Tehran

##### Province

Tehran

##### Postal code

198396-3113

##### Phone

+98 21 2610 9512

##### Fax

##### Email

smrhashemian@sbm.ac.ir

##### Web page address

## Person responsible for scientific inquiries

#### Contact

##### Name of organization / entity

Shahid Beheshti University of Medical Sciences

##### Full name of responsible person

Seyed Mohammad reza Hashemian

##### Position

Professor

##### Latest degree

Subspecialist

##### Other areas of specialty/work

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**Phone**  
+98 21 2610 9512  
**Fax**  
**Email**  
smrhashemian@sbmu.ac.ir  
**Web page address**

## Person responsible for updating data

### Contact

**Name of organization / entity**  
Shahid Beheshti University of Medical Sciences  
**Full name of responsible person**  
Seyed Mohammad Reza Hashemian  
**Position**  
Professor  
**Latest degree**  
Subspecialist  
**Other areas of specialty/work**  
Anesthesiology  
**Street address**  
Masih Daneshvari Hospital, Darabad, Niavaran Street,  
Tehran, Iran  
**City**  
Tehran  
**Province**  
Tehran  
**Postal code**  
198396-3113  
**Phone**  
+98 912 111 9279  
**Fax**  
**Email**  
iran.criticalcare@yahoo.com  
**Web page address**

## 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 patient information can be published after deleting the name

### When the data will become available and for how long

It will take a month from the time of application

### To whom data/document is available

All professors of medical universities in the country

### Under which criteria data/document could be used

If the professors present their proposal and letter from their university by sending a message to Dr. Hashemian's e-mail, they will send their e-mail request and the names and numbers of the patients will be deleted and their questionnaires, data and analysis will be sent to their e-mails.

### From where data/document is obtainable

professor hashemian in masih daneshvari hospital

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

one month

### Comments