

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

27 Jun 2026

### Investigating the hemoperfusion effect on the recovery of hospitalized patients with severe COVID-19 symptoms in Imam Khomeini Hospital, Urmia; a before-after pilot study

#### Protocol summary

##### Study aim

Determining the effect of hemoperfusion on the improvement of symptoms of Covid-19 patients who are hospitalized with severe symptoms and the symptoms are resistant to common treatments

##### Design

A single-arm clinical trial without blinding and randomization on a group of patients involving at least 20 patients

##### Settings and conduct

Patients admitted to Imam Khomeini Hospital in Urmia with severe symptoms of COVID-19 will undergo hemoperfusion in two sessions. The variables studied in this study include para-clinical examinations (WBC changes, renal and hepatic profile), hospitalization period, age, sex and body mass index, vital signs. After completion of two sessions of hemoperfusion (blood pressure, heart rate, respiration rate, arterial blood oxygen level), pulmonary involvement severity (according to control CT-scans), and mortality will be recorded. Complications of hemoperfusion related to catheter insertion and complication occurred during the hemoperfusion will be recorded too

##### Participants/Inclusion and exclusion criteria

Patients with severe symptoms following Covid-19 with pulmonary involvement according to CT scan more than 50%, and in patients with pulmonary involvement less than 50% who has respiratory distress, or despite receiving oxygen with a reservoir mask or non-invasive ventilation So<sub>2</sub> is less than 88%. And the patients should not have any coagulation disorder, vasculitis, sepsis and malignancy and severe underlying disease that reduces life expectancy

##### Intervention groups

Patients will undergo hemoperfusion for 3 hours with a special cartridge to remove inflammatory cytokines that damage the organs through a femoral catheter. Then the

patient's symptoms are evaluated if necessary. Another 3-hour hemoperfusion session is performed

##### Main outcome variables

respiratory status based on SO<sub>2</sub>, renal and hepatic function, State of consciousness

#### General information

##### Reason for update

##### Acronym

##### IRCT registration information

IRCT registration number: **IRCT20180625040232N7**

Registration date: **2020-11-30, 1399/09/10**

Registration timing: **registered\_while\_recruiting**

Last update: **2020-11-30, 1399/09/10**

Update count: **0**

##### Registration date

2020-11-30, 1399/09/10

##### Registrant information

##### Name

Saman Farshid

##### Name of organization / entity

##### Country

Iran (Islamic Republic of)

##### Phone

+98 44 3346 9931

##### Email address

farshid.s@umsu.ac.ir

##### Recruitment status

**Recruitment complete**

##### Funding source

##### Expected recruitment start date

2020-11-10, 1399/08/20

##### Expected recruitment end date

2021-02-08, 1399/11/20

**Actual recruitment start date**

empty

**Actual recruitment end date**

empty

**Trial completion date**

empty

**Scientific title**

Investigating the hemoperfusion effect on the recovery of hospitalized patients with severe COVID-19 symptoms in Imam Khomeini Hospital, Urmia; a before-after pilot study

**Public title**

The effect of hemoperfusion on patients with severe symptoms of covid-19 which are resistant to conventional therapies

**Purpose**

Treatment

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

Covid-19 patients admitted with severe symptoms who do not respond to conventional therapies based on guidelines satisfaction with performing of hemoperfusion lung involvement more than 50% according to Chest- CT imaging In patients with lungs involvement less than 50% with respiratory distress, or SO<sub>2</sub> less than 88%, despite receiving supplementary oxygen with a reservoir mask or NIV

**Exclusion criteria:**

uncorrected coagulopathy in patients vasculitis sepsis Patients with low life expectancy due to underlying disease

**Age**

No age limit

**Gender**

Both

**Phase**

N/A

**Groups that have been masked**

*No information*

**Sample size**

Target sample size: 20

**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 Urmia University of Medical Sciences

**Street address**

Urmia University of Medical Sciences, Resalat Blvd- Emergency Alley, Urmia, Vest Azarbaijan

**City**

Urmia

**Province**

West Azarbaijan

**Postal code**

5714783734

**Approval date**

2020-11-11, 1399/08/21

**Ethics committee reference number**

IR.UMSU.REC.1399.259

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

Hospitalized patients with COVID-19 symptoms

**ICD-10 code**

U07.1

**ICD-10 code description**

COVID-19, virus identified

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

Respiratory status regarding So<sub>2</sub>

**Timepoint**

After performing of two session hemoperfusion

**Method of measurement**

By pulse oximetry

**Secondary outcomes**

empty

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

Intervention group: There is one intervention group that includes COVID-19 patients admitted with severe symptoms who are resistant to common medical treatments. These patients will undergo hemoperfusion in 2 sessions and then the patients' paraclinical findings and vital signs will be evaluated.

**Category**

Treatment - Devices

## Recruitment centers

1

### Recruitment center

**Name of recruitment center**

Imam Khomeini hospital Urmia

**Full name of responsible person**

Saman Farshid

**Street address**

Imam Khomeini hospital , Erash blvd , Urmia

**City**

Urmia

**Province**

West Azarbaijan

**Postal code**

57157-81351

**Phone**

+98 44 3346 9931

**Email**

samanf63@gmail.com

## Sponsors / Funding sources

1

### Sponsor

**Name of organization / entity**

Oroumia University of Medical Sciences

**Full name of responsible person**

Dr Iraj Mohebi

**Street address**

Urmia University of Medical Sciences, Resalat Blvd-  
Emergency Alley, Urmia, West Azarbaijan

**City**

Urmia

**Province**

West Azarbaijan

**Postal code**

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+98 44 3223 4896

**Email**

mohebbi\_iraj@yahoo.co.uk

**Grant name**

**Grant code / Reference number**

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

Yes

**Title of funding source**

Oroumia 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**

Oroumia University of Medical Sciences

**Full name of responsible person**

Saman Farshid

**Position**

Assitant Professor

**Latest degree**

Subspecialist

**Other areas of specialty/work**

Urology

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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**

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**

Patients data will be shared based on codes assigned to patients

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

6 months after the publication of the article

**To whom data/document is available**

University Faculty Members

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

for research purposes

**From where data/document is obtainable**

sending an email to Dr Saman Farshid  
samanf63@gmail.com

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

One week after sending the email and checking the purpose of the request

**Comments**