Clinical Trial Protocol
Iranian Registry of Clinical Trials

28 Jun 2026

Investigaing 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 session 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 insersion and complication occured 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 So2 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 SO2, 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
Investigaing 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 satiscfaction 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 SO2 less than 88%, despite receiving supplementory 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 So2
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

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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

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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 scientific inquiries

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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