Clinical Trial Protocol
Iranian Registry of Clinical Trials

16 Sep 2026

Comparison of Ultrafiltration Modeling and filtration dialysis in chronic dialysis patient on arterial oxygen content during dialysis

Protocol summary

Study aim
Comparison of Ultrafiltration Modeling and filtration dialysis in chronic dialysis patient on arterial oxygen content during dialysis

Design
A clinical trial with no control group, with no crossover, non-randomized, no placebo-controlled, single-center. Sample size is 80 patients.

Settings and conduct
Hemodialysis ward of Semnan Kowsar Hospital. Patients' oxygenation rate is assessed by ultrafiltration and dialysis.

Participants/Inclusion and exclusion criteria
Hemodialysis Patients Referred to Semnan Kowsar Hospital. Inclusion criteria: Dialysis patients over 18 years; Three months have elapsed since the patient began dialysis; No respiratory problems including asthma and respiratory disease. Exclusion criteria: Having metastatic lung cancer; Lack of informed consent.

Intervention groups
Intervention group 1: Patients undergo dialysis according to the one month protocol with a dialysis machine set up on ultra-filtration modeling. Intervention group 2: Patients according to protocol are dialyses in the second month by simple procedure.

Main outcome variables
Blood pressure; Filtration volume; Arterial blood oxygen levels.

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20151228025732N49**
Registration date: **2020-02-04, 1398/11/15**
Registration timing: **registered_while_recruiting**
Last update: **2020-02-04, 1398/11/15**
Update count: **0**

Registration date
2020-02-04, 1398/11/15

Registrant information

Name
Alireza Emadi

Name of organization / entity
Semnan University of Medical Sciences, Semnan, Iran

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Iran (Islamic Republic of)

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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2019-10-22, 1398/07/30

Expected recruitment end date
2020-07-20, 1399/04/30

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
Comparison of Ultrafiltration Modeling and filtration dialysis in chronic dialysis patient on arterial oxygen content during dialysis

Public title
Comparison of Ultrafiltration Modeling and filtration dialysis in chronic dialysis patient on arterial oxygen content during dialysis

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Dialysis patients over 18 years Three months have elapsed since the patient began dialysis No respiratory problems including asthma and respiratory disease

Exclusion criteria:

Having metastatic lung cancer Lack of informed consent

Age

From **18 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **80**

Randomization (investigator's opinion)

N/A

Randomization description

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Crossover

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Semnan University of Medical Sciences

Street address

Semnan University of Medical Sciences, Basij Blvd, Semnan

City

Semnan

Province

Semnan

Postal code

3514799442

Approval date

2019-10-22, 1398/07/30

Ethics committee reference number

IR.SEMUMS.REC.1398.188

Health conditions studied

1

Description of health condition studied

Dialysis

ICD-10 code

R88.0

ICD-10 code description

Cloudy (hemodialysis) (peritoneal) dialysis effluent

Primary outcomes

1

Description

Blood pressure

Timepoint

Before and after dialysis

Method of measurement

Mercury barometer

2

Description

Filtration volume

Timepoint

From the beginning to the end of dialysis

Method of measurement

Liters

3

Description

Arterial blood oxygen levels

Timepoint

From the beginning to the end of dialysis

Method of measurement

Oximeter pulse device

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group 1: Patients undergo dialysis according to the one month protocol with a dialysis machine set up on ultra-filtration modeling.

Category

Treatment - Devices

2

Description

Intervention group 2: Patients according to protocol are dialyses in the second month by simple procedure.

Category

Treatment - Devices

Recruitment centers

1

Recruitment center

Name of recruitment center
Kowsar Hospital

Full name of responsible person
Malihe Yarmohammadi

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Street Amin, Semnan

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity
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Full name of responsible person
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Grant name

Grant code / Reference number

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

Title of funding source
Semnan 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
Semnan University of Medical Sciences

Full name of responsible person
Malihe Yarmohammadi

Position
Assistant Professor

Latest degree
Subspecialist

Other areas of specialty/work
Nephrology

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Sharing plan

Deidentified Individual Participant Data Set (IPD)
Undecided - It is not yet known if there will be a plan to make this available
Study Protocol
Undecided - It is not yet known if there will be a plan to make this available
Statistical Analysis Plan
No - There is not a plan to make this available
Informed Consent Form
No - There is not a plan to make this available
Clinical Study Report
No - There is not a plan to make this available
Analytic Code
No - There is not a plan to make this available
Data Dictionary
No - There is not a plan to make this available