

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Effect of lowering dialysate temperature on the quality of hemodialysis in patients undergoing hemodialysis in 5t Azar hospital

Protocol summary

Summary

This is a clinical trial study with randomized controlled design. The purpose of this study is to determine the effect of reducing dialysate temperature on the quality of hemodialysis in dialysis patients. Our samples are included the patients undergoing hemodialysis in 5th Azar hospital who have the inclusion criteria during one month before of study. Simple random sampling technique was employed to select 50 patients that divided into 2 groups of 25 persons. In crossover study, patients are assessed during 24 dialysis sessions; the first group received hemodialysis for 12 sessions using cool dialysate (35.5°C) and the second group is on hemodialysis with standard dialysate temperature (37°C). Then the method of treatment is replaced in two groups for the next 12 sessions. Hemodynamic parameters including SBP, DBP and heart rate (HR) are recorded hourly, before, during and after dialysis. Clinical complaints and treatment interventions related to hypotension are noted. Oral temperature is measured before and immediately after dialysis. For all patients, dialysis adequacy is measured 5 times and Petersburg Sleep Quality Index (PSQI) questionnaire is checked for three stages; before the intervention, before moving groups and at the end of the study.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201306268140N2**
Registration date: **2013-07-14, 1392/04/23**
Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2013-07-14, 1392/04/23

Registrant information

Name

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Name of organization / entity

Golestan University of Medical Sciences

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Recruitment status

Recruitment complete

Funding source

Deputy of Research and Technology Golestan University of Medical Sciences

Expected recruitment start date

2013-06-22, 1392/04/01

Expected recruitment end date

2013-08-23, 1392/06/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of lowering dialysate temperature on the quality of hemodialysis in patients undergoing hemodialysis in 5t Azar hospital

Public title

Effect of lowering dialysate temperature on the quality of hemodialysis

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria: the samples are included the patients undergoing hemodialysis at 5th Azar hospital having:

hypotension in more than 30 percent of dialysis sessions (more than three sessions), during one month before the study; three times dialysis per week with sodium bicarbonate solution; patients did not receive analgesic, anti-hypertensive and anti-spasm during four hours before of dialysis; no history of chronic infections, heart failure, chronic lung disease, drugs / alcohol abuse or require of treatment for mental disorders, severe anemia, coronary artery disease; age more than 18 years old and more than three month's dialysis treatment.

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: **50**

Randomization (investigator's opinion)

Randomized

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

Single blinded

Blinding description**Placebo**

Not used

Assignment

Crossover

Other design features**Secondary Ids**

empty

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

Golestan University of Medical Sciences

Street address

Kilometer 2 Gorgan sari -Golestan University of Medical Sciences

City

Gorgan

Postal code**Approval date**

2013-03-17, 1391/12/27

Ethics committee reference number

340791122702

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

End stage kidney disease

ICD-10 code

N18.5

ICD-10 code description

End stage kidney disease

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

dialysis adequacy

Timepoint

5 times

Method of measurement

Laboratory method with URR

2**Description**

Sleep Quality

Timepoint

3 times

Method of measurement

Petersburg Sleep Quality Index (PSQI) questionnaire

3**Description**

Blood pressure

Timepoint

hourly, before, during and after dialysis

Method of measurement

Blood pressure based on mm Hg, monitoring by Gambro AK96 dialysis machine

4**Description**

Temperature

Timepoint

before and immediately after dialysis

Method of measurement

Thermometer

5**Description**

Muscle cramps

Timepoint

pre, intra & post dialysis

Method of measurement

checklist

Secondary outcomes

empty

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

In crossover study, patients are assessed during 24 dialysis sessions; the first group received hemodialysis

for 12 sessions using cool dialysate (35.5°C) and the second group is on hemodialysis with standard dialysate temperature (37°C). Then the method of treatment is replaced in two groups for the next 12 sessions. Each patient gets dialysis once with routine temperature and once with cool dialysate. Patients are assessed during 24 dialysis sessions; the first group receives hemodialysis for 12 sessions using cool dialysate (35.5°C) and the second group is on hemodialysis with standard dialysate temperature (37°C). Then the method of treatment is replaced in two groups for the next 12 sessions. During the study, all the dialysis conditions are maintained the same except temperature of dialysate (37°C or 35.5°). All patients are on hemodialysis using GAMRO AK96 hemodialysis machine.

Category

Prevention

Recruitment centers**1****Recruitment center****Name of recruitment center**

Dialysis therapy 5t Azar hospital

Full name of responsible person**Street address****City**

Gorgan

Sponsors / Funding sources**1****Sponsor****Name of organization / entity**

Golestan University of Medical Sciences

Full name of responsible person

Golalipour Mohammad Jafar

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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

Golestan University of Medical Sciences

Proportion provided by this source

100

Public or private sector

empty

Domestic or foreign origin

empty

Category of foreign source of funding

empty

Country of origin**Type of organization providing the funding**

empty

Person responsible for general inquiries**Contact****Name of organization / entity**

Golestan University of Medical Sciences

Full name of responsible person

Mollaie Einollah

Position

Assistant Professor, Department of Medical Surgical Nursing

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

empty

Study Protocol

empty

Statistical Analysis Plan

empty

Informed Consent Form

empty

Clinical Study Report

empty

Analytic Code

empty

Data Dictionary

empty