

Clinical Trial Protocol

Iranian Registry of Clinical Trials

27 Jul 2026

The effect of Increasing blood flow rate on Dimensions of fatigue in hemodialysis patients

Protocol summary

Summary

Aim: To determine the effect of increasing blood flow rate on physical fatigue dimensions in hemodialysis patients. Inclusion criteria of study included a being under hemodialysis for at least 6 months, three sessions of dialysis for four hours weekly, having arteriovenous fistula or graft. The exclusion criteria of study included lack of desire to continue the intervention, intolerance to more round number of device and patients who find hemodynamic disorder during the intervention. The study population consisted of patients hospitalized in 17 Shahrivar hospital and Shafa dialysis center. Among all patients, 80 patients were selected using convince sampling method. Two sessions before intervention, researcher referred to department and recorded the pomp round of device for each patient separately and then calculated the mean of two sessions. For experimental group subjects, blood flow rate of hemodialysis device is increases in the first two weeks by 25 rounds compared to mean number of device rounds in two sessions before the start of intervention and during the second two weeks by 50 rounds compared to mentioned mean. In the control group, the mean number of rounds of device is set on same mean round of two sessions before intervention. Dimensions of fatigue are measured using a standard questionnaire MFI before intervention, two weeks (sixth session) and four weeks (twelfth session) after the intervention in the experimental and control groups (before and after the dialysis session) will be measured.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2017042433617N1**

Registration date: **2017-05-24, 1396/03/03**

Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2017-05-24, 1396/03/03

Registrant information

Name

Hossein Kakhki Jaghargh

Name of organization / entity

Mashhad University of Medical Sciences

Country

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Phone

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Recruitment status

Recruitment complete

Funding source

Mashhad University of Medical Sciences and Health Services.

Expected recruitment start date

2017-05-13, 1396/02/23

Expected recruitment end date

2017-11-14, 1396/08/23

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of Increasing blood flow rate on Dimensions of fatigue in hemodialysis patients

Public title

The effect of Increasing blood flow rate on Dimensions of fatigue in hemodialysis patients

Purpose

Prevention

Inclusion/Exclusion criteria
 Inclusion criteria: desire to participate in the study; being under hemodialysis for at least 6 months; having a history in hemodialysis department of the study environment; three sessions of dialysis for four hours weekly; having arteriovenous fistula or graft; having a degree of fatigue based of fatigue measurement standard questionnaires MFI; absence of history of hemodialysis complications (hemodynamic, etc.) in the past month; absence of intellectual disabilities or cognitive disorders; lack of chronic debilitating such as heart and respiratory class 4 diseases confirmed by department physician; mean pump round less than 300 (cc per minute) during two sessions before sampling; lack of mental diseases such as major depression and no history of psychiatric hospitalization; absence of active cancer; non-severe infection; and lack of crisis in the last 6 months. The exclusion criteria of study included lack of desire to continue the intervention; intolerance to more round number of device and patients who find hemodynamic disorder during the intervention; and severe anemia (hematocrit less than 20%).

Age
 From **18 years** old to **68 years** old

Gender
 Both

Phase
 N/A

Groups that have been masked
No information

Sample size
 Target sample size: **80**

Randomization (investigator's opinion)
 Randomized

Randomization description

Blinding (investigator's opinion)
 Single blinded

Blinding description

Placebo
 Not used

Assignment
 Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Mashhad University of Medical Sciences and Health Services.

Street address

street Crossroads School of Nursing and Midwifery

City

Mashhad

Postal code

Approval date

2017-03-11, 1395/12/21

Ethics committee reference number

IR.MUMS.REC.1395.612

Health conditions studied

1

Description of health condition studied

Fatigue Hemodialysis Patients

ICD-10 code

N18.5

ICD-10 code description

Chronic kidney disease, stage 5

Primary outcomes

1

Description

Dimensions of fatigue in hemodialysis patients

Timepoint

before intervention, two weeks (sixth session) and four weeks (twelfth session) after the intervention

Method of measurement

Multidimensional Fatigue Inventory MFI

Secondary outcomes

1

Description

Increasing blood flow rate

Timepoint

In each session of hemodialysis

Method of measurement

With hemodialysis machine

Intervention groups

1

Description

For experimental group subjects, blood flow rate of hemodialysis device is increases in the first two weeks by 25 rounds compared to mean number of device rounds in two sessions before the start of intervention and during the second two weeks by 50 rounds compared to mentioned mean.

Category

Treatment - Other

2

Description

In the control group, the mean number of rounds of device is set on same mean round of two sessions before intervention.

Category

Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center

17 Shahrivar Hospital Dialysis Center

Full name of responsible person

Hossein Kakhki

Street address**City**

Mashhad

2

Recruitment center

Name of recruitment center

Shafa Dialysis Center

Full name of responsible person

Hossein Kakhki

Street address**City**

Mashhad

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Mashhad University Of Medical Sciences And Health Services.

Full name of responsible person

Dr Saeed Islami

Street address

Building Qureshi, Street Daneshgah

City

Mashhad

Grant name**Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

Title of funding source

Mashhad University Of Medical Sciences And Health Services.

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**

Mashhad University Of Medical Sciences

Full name of responsible person

Hossein Kakhki Gagharagh

Position

Nursing Graduate Student

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Web page address

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