Clinical Trial Protocol
Iranian Registry of Clinical Trials

16 Sep 2026

Effect of physical exercise versus no exercise on blood parameters in hemodialysis patients: a randomized clinical trial

Protocol summary

Summary

Objectives: To assess the effect of physical exercise versus no exercise on blood parameters in hemodialysis patients Design: A randomized clinical trial. Setting and conduct: The eligible hemodialysis patients who will refer to Besat Hospital during the study period will be enrolled into the trial. Inclusion criteria: (a) age of 18 to 65 years; (b) history of hemodialysis for at least 3 months; (C) serum ferritin level between 200 to 400 ng/dl. Exclusion criteria: (a) not participating in the program for 2 consecutive sessions or three sequential sessions; (b) need to kidney transplantation; (c) hiving cardiovascular diseases or musculoskeletal disorders; (d) history of cerebral ischemia during the last 3 months; (e) contraindication for physical activity. Intervention group: Routine hemodialysis plus physical activity 3 sessions a week for 4 weeks. Control group: Routine hemodialysis alone without physical activity. Primary outcome: (a) assessing the RBC before and one month after beginning of intervention through laboratory techniques; (b) assessing the WBC before and one month after beginning of intervention through laboratory techniques; (c) assessing the hemoglobin before and one month after beginning of intervention through laboratory techniques; (d) assessing the hematocrit before and one month after beginning of intervention through laboratory techniques; (e) assessing the platelet before and one month after beginning of intervention through laboratory techniques; (f) assessing the BUN before and one month after beginning of intervention through laboratory techniques; (g) assessing the creatinine before and one month after beginning of intervention through laboratory techniques. Secondary outcome: Nothing.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201506139014N69**

Registration date: **2015-06-18, 1394/03/28**

Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2015-06-18, 1394/03/28

Registrant information

Name

Jalal Poorolajal

Name of organization / entity

Department of Epidemiology & Biostatistics Hamadan University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 81 1838 0090

Email address

poorolajal@umsha.ac.ir

Recruitment status

Recruitment complete

Funding source

Vice-chancellor for Research the Technology, Hamadan University of Medical Sciences

Expected recruitment start date

2015-02-20, 1393/12/01

Expected recruitment end date

2015-06-21, 1394/03/31

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of physical exercise versus no exercise on blood parameters in hemodialysis patients: a randomized

clinical trial

Public title
Effect of physical exercise versus no exercise on blood parameters in hemodialysis patients
Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria: (a) age of 18 to 65 years; (b) history of hemodialysis for at least 3 months; (C) serum ferritin level between 200 to 400 ng/dl. Exclusion criteria: (a) not participating in the program for 2 consecutive sessions or three sequential sessions; (b) need to kidney transplantation; (c) hiving cardiovascular diseases or musculoskeletal disorders; (d) history of cerebral ischemia during the last 3 months; (e) contraindication for physical activity.
Age
From **18 years** old to **65 years** old
Gender
Both

Phase
2
Groups that have been masked
No information
Sample size
Target sample size: **70**
Randomization (investigator's opinion)
Randomized
Randomization description
Blinding (investigator's opinion)
Not blinded
Blinding description
Placebo
Not used
Assignment
Parallel
Other design features
Randomization: The patients will be randomly assigned to intervention and control groups through drawing lot. Blinding: Not possible.

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Ethic Committee of Hamadan University of Medical Sciences
Street address
Vice-chancellor of Research the Technology, Hamadan University of Medical Sciences, Shahid Fahmideh Ave
City
Hamadan
Postal code
6517838695
Approval date
2015-05-23, 1394/03/02
Ethics committee reference number
IR.UMSHA.REC.1394.48

Health conditions studied

1

Description of health condition studied
Hemodialysis
ICD-10 code
Z49.1
ICD-10 code description
Extracorporeal dialysis

Primary outcomes

1

Description
assessing the RBC
Timepoint
before and one month after beginning of intervention
Method of measurement
through laboratory techniques

2

Description
assessing the WBC
Timepoint
before and one month after beginning of intervention
Method of measurement
through laboratory techniques

3

Description
assessing the hemoglobin
Timepoint
before and one month after beginning of intervention
Method of measurement
through laboratory techniques

4

Description
assessing the hematocrit
Timepoint
before and one month after beginning of intervention
Method of measurement
through laboratory techniques

5

Description
assessing the platelet
Timepoint
before and one month after beginning of intervention
Method of measurement
through laboratory techniques

6

Description
assessing the BUN
Timepoint
before and one month after beginning of intervention
Method of measurement
through laboratory techniques

7

Description
assessing the creatinine
Timepoint
before and one month after beginning of intervention
Method of measurement
through laboratory techniques

Secondary outcomes

1

Description
Nothing
Timepoint
Nothing
Method of measurement
Nothing

Intervention groups

1

Description
Routine hemodialysis plus physical activity 3 sessions a week for 4 weeks
Category
Other

2

Description
Routine hemodialysis alone without physical activity
Category
N/A

Recruitment centers

1

Recruitment center
Name of recruitment center
Besat Hospital
Full name of responsible person
Ali Nezamloo
Street address
Besat Hospital, Shahed Square
City
Hamadan

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Vice-chancellor for Research the Technology, Hamadan University of Medical Sciences
Full name of responsible person
Dr Saeid Bashirian
Street address
Hamadan University of Medical Sciences, Shahid Fahmideh Ave
City
Hamadan
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Vice-chancellor for Research the Technology, Hamadan 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
Besat Hospital
Full name of responsible person
Ali Nezamloo
Position
Intensive Care Student
Other areas of specialty/work
Street address
Besat Hospital, Shahed Square
City
Hamadan
Postal code
Phone
+98 81 3264 0020
Fax
Email
nezamlo.ali@gmail.com
Web page address

Person responsible for scientific inquiries

Contact
Name of organization / entity

Besat Hospital
Full name of responsible person
Dr Khodayar Oshvandi
Position
Nursing PhD
Other areas of specialty/work
Street address
Besat Hospital, Shahed Square
City
Hamadan
Postal code
Phone
+98 81 3264 0020
Fax
Email
oshvandi2005@yahoo.com
Web page address

Person responsible for updating data

Contact
Name of organization / entity
Department of Epidemiology
Full name of responsible person
Dr Jalal Poorolajal
Position
Associate Professor
Other areas of specialty/work
Street address
School of Public Health, Hamadan University of Medical Sciences, Shahid Fahmideh Ave
City
Hamadan
Postal code
6517838695
Phone
+98 81 3838 0090
Fax
Email
poorolajal@umsha.ac.ir
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