Clinical Trial Protocol
Iranian Registry of Clinical Trials

17 Sep 2026

Evaluation of the effect of combined exercise on lipid profile and total antioxidant among cardiovascular patients

Protocol summary

Study aim

The aim of this study is to compare the combined exercise time on lipid profile and total antioxidant capacity among cardiovascular patients.

Design

Clinical trials with control group, parallel group design, Not blinded, Not randomized

Settings and conduct

The population under study is a coronary artery bypass graft that has a positive exercise test and is present at the heart rehabilitation department of Afshar Hospital in Yazd. Patients will be excluded during the study if they do not want to participate in the study or develop any cardiovascular disease or skeletal problem. Individuals will be randomly divided into two groups, including a group that will receive cardiac rehabilitation and drug treatment and a control group that only will receive drug treatment. In each group, 10 people will be examined.

Participants/Inclusion and exclusion criteria

Inclusion criteria: Coronary artery bypass graft surgery, low risk and Ejection fraction of 30%. Non inclusion criteria: unstable angina, uncorrected heart failure, cardiac infarction over the past four weeks, ventricular arrhythmias.

Intervention groups

Intervention group: 8 weeks of cardiac rehabilitation (aerobic exercise and resistance training) consisting of 3 sessions per week with an intensity of 50-80% of heart rate reserve or Borg 11-13 depending on subjects' strength and resistance training.The training course along with the usual treatment of heart disease risk factors will include hyperlipidemia and high blood pressure. Exercises will follow the overload principle. Control group: Those who do not participate in the rehabilitation program despite the physician's recommendation and their usual treatment of heart disease risk factors, including hyperlipidemia and high blood pressure.

Main outcome variables

The lipid profile and total antioxidant capacity

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20190529043755N2**
Registration date: **2019-08-10, 1398/05/19**
Registration timing: **retrospective**

Last update: **2019-08-10, 1398/05/19**
Update count: **0**

Registration date

2019-08-10, 1398/05/19

Registrant information

Name

Mohammad Marandi

Name of organization / entity

University of Esfahan

Country

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2017-10-12, 1396/07/20

Expected recruitment end date

2018-04-09, 1397/01/20

Actual recruitment start date

2018-01-10, 1396/10/20

Actual recruitment end date

2018-11-14, 1397/08/23

Trial completion date
2018-11-14, 1397/08/23

Scientific title
Evaluation of the effect of combined exercise on lipid profile and total antioxidant among cardiovascular patients

Public title
The effect of combined exercise on lipid profile and total antioxidant among cardiovascular patients
Purpose
Supportive
Inclusion/Exclusion criteria
Inclusion criteria:
Patients after Coronary Artery Bypass Graft Surgery Surgical Injection site restoration Having a low risk and ejection fraction of 30%
Exclusion criteria:
Not compensated heart failure Unstable angina Myocardial infarction over the past four weeks Ventricular arrhythmia
Age
No age limit
Gender
Male

Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: **20**
Actual sample size reached: **20**
Randomization (investigator's opinion)
Not randomized
Randomization description
Blinding (investigator's opinion)
Not blinded
Blinding description
Placebo
Not used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Ethics Committee of Yazd Shahid Sadoughi University of Medical Sciences
Street address
Central organization of Medical Sciences and Health Services, Shahid Dr.Bahonar Squre
City
Yazd
Province
Yazd
Postal code
8916978477
Approval date
2017-12-15, 1396/09/24
Ethics committee reference number
IR.SSU.REC.1396.108

Health conditions studied

1

Description of health condition studied
Patients after Coronary Artery Bypass Graft Surgery
ICD-10 code
I25.1
ICD-10 code description
Atherosclerotic heart disease of native coronary artery

Primary outcomes

1

Description
Serum Total antioxidant capacity
Timepoint
Before the start of the study , 4 and 8 weeks after the intervention
Method of measurement
Spectrophotometery

2

Description
Serum level of Lipid profile
Timepoint
Before the start of the study , 4 and 8 weeks after the intervention
Method of measurement
Chemical methode

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: 8 weeks cardiac rehabilitation (aerobic exercises and resistance training) included 3 sessions per week with an intensity of 50-80% of the heart rate reserve or the criterion of Borg 11-13 depending on the ability of the subjects and for each session up to 90 minutes as follows:Walking on the treadmill 20 to 30 minutes, the pedal on the fixed bike 10 to 12 minutes, the use of a handheld meter is 10 minutes and the resistance training consists of three repetitive sets, three movements for upper limbs and two lower extremity movements. Training course with

the usual treatment of cardiac risk factors will include high hyperlipidemia and hypertension. The exercises will be carried out by observing the principle of overload.

Category

Rehabilitation

2

Description

Control group: Those who do not participate in the rehabilitation program despite their doctor's recommendation and the usual treatment of heart disease risk factors include hyperlipidemia and hypertension.

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Afshar Heart Rehabilitation

Full name of responsible person

Mohammad Reza Vafaei Nsab

Street address

Afshar Hospital in Yazd, Jomhoori Eslami Bolevard

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

The Isfahan University

Full name of responsible person

Masoud Roknizadeh

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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

The Isfahan University

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

The University of Isfahan

Full name of responsible person

Mohammad Marandi

Position

Professor

Latest degree

Ph.D.

Other areas of specialty/work

Physiology

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

No - There is not a plan to make this available

Justification/reason for indecision/not sharing IPD

Due to the confidentiality of some patients' information and their dissatisfaction with the publication

Study Protocol

No - There is not 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