

Clinical Trial Protocol

Iranian Registry of Clinical Trials

20 Jun 2026

Efficacy of aerobic exercise on diastolic function after coronary artery bypass graft surgery

Protocol summary

Summary

The aim of this study is to evaluate the effect of high intensity aerobic exercise on diastolic function after coronary artery bypass surgery (CABG). 44 patients who had CABG 3 months before the study and had no Left ventricular hypertrophy (LVH), Hypertension (HTN) and Atrial fibrillation (AF) rhythm preexamined by transthoracic echocardiography and diastolic indexes such as Isovolumic relaxation time (IVRT); Deceleration time (DT); Transmitral flow velocity with atrial contraction duration/Flow from left atrium to pulmonary veins during atrial contraction duration (Mitral A duration/Pulmonary A duration); Early diastolic transmitral flow velocity/Velocity of early diastolic mitral annular motion (E/EA); Pulmonary veins systolic flow/Pulmonary veins diastolic flow (PVS/PVD); Early diastolic transmitral flow velocity/Transmitral flow velocity with atrial contraction (E/A) were measured. Then patients rehabilitated by high intensity aerobic exercise for 24 sessions 3 times in a week under nurses supervision. Then diastolic indexes were reevaluated and recorded in forms and analyzed by statistical methods.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201108147321N1**
Registration date: **2011-10-24, 1390/08/02**
Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2011-10-24, 1390/08/02

Registrant information

Name

Mostafa Bahremand

Name of organization / entity

Kermanshah University of Medical Sciences and Health Services

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Recruitment status

Recruitment complete

Funding source

Kermanshah university of medical sciences

Expected recruitment start date

2011-08-11, 1390/05/20

Expected recruitment end date

2012-01-10, 1390/10/20

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Efficacy of aerobic exercise on diastolic function after coronary artery bypass graft surgery

Public title

Effect of aerobic exercise on diastolic function after coronary artery bypass graft surgery

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: Patients who had underwent CABG 3 months before the study and had diastolic dysfunction (grade I-IV) by echocardiography. Exclusion criteria: Patients who had left ventricular hypertrophy (LVH) by echocardiography; uncontrolled hypertension (HTN)

(resting blood pressure >140/90); atrial fibrillation (AF) rhythm and had surgery on their valves

Age

No age limit

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: 44

Randomization (investigator's opinion)

N/A

Randomization description

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Single

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Kermanshah university of medical sciences and health services

Street address

Shahid Beheshti blvd

City

Kermanshah

Postal code

Approval date

2011-06-28, 1390/04/07

Ethics committee reference number

10100/420/7/پ

Health conditions studied

1

Description of health condition studied

Heart diastolic dysfunction

ICD-10 code

I30-I52

ICD-10 code description

Other forms of heart disease

Primary outcomes

1

Description

Grade of diastolic dysfunction

Timepoint

Pre and post rehabilitation

Method of measurement

By echocardiography

2

Description

DT

Timepoint

Pre and post rehabilitation

Method of measurement

By echocardiography

3

Description

IVRT

Timepoint

Pre and post rehabilitation

Method of measurement

By echocardiography

4

Description

E/A

Timepoint

Pre and post rehabilitation

Method of measurement

By echocardiography

5

Description

Mitral A duration /PVA duration

Timepoint

Pre and post rehabilitation

Method of measurement

By echocardiography

6

Description

PVS/PVD

Timepoint

Pre and post rehabilitation

Method of measurement

By echocardiography

7

Description

E/Ea

Timepoint

Pre and post rehabilitation

Method of measurement

By echocardiography

Secondary outcomes

1

Description

LVEF

Timepoint

Pre and post rehabilitation

Method of measurement

By echocardiography

Intervention groups

1

Description

The patients rehabilitation consists of one hour high intensity aerobic exercise three times in a week for overall 24 sessions

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Imam Ali hospital

Full name of responsible person

Ahmad Ali Raeisei

Street address

Imam ali hospital, Shahid Beheshti blvd

City

Kermanshah

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice chancellor for research, Kermanshah university of medical sciences and health services

Full name of responsible person

Dr. Farid Najafi

Street address

Shahid beheshti blvd, Kermanshah university of medical sciences and health services

City

Kermanshah

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, Kermanshah 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

Kermanshah university of medical sciences and health services

Full name of responsible person

Ahmad Ali Raeisei

Position

Cardiology resident

Other areas of specialty/work

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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