

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Effect of cardiac rehabilitation on level of endostatin, SDF1 and PDGF in patients with atherosclerosis after CABG

Protocol summary

Study aim

Effect of cardiac rehabilitation on level of endostatin, SDF1 and PDGF in patients with atherosclerosis after CABG

Design

The clinical task consisted of two groups of practice and control in a simple random method with factorial group

Settings and conduct

Exercises were performed in rehabilitation ward of Mashhad Javad Alaemeh Cardiovascular Specialist Hospital in two simple randomized, non-blinded, aerobic and control groups.

Participants/Inclusion and exclusion criteria

Inclusion criteria: Patients aged 40-60 years who underwent coronary artery bypass graft surgery and had no hypertension, diabetes, and chest pain. Exclusion criteria: Patients with hypertension, diabetes, chest pain.

Intervention groups

Intervention group: Patients aged 40-60 years who underwent coronary artery bypass graft surgery and received resistance aerobic combined exercise intervention. Control group: Patients aged 40-60 years who underwent coronary artery bypass graft surgery and did not receive resistance aerobic combined exercise intervention.

Main outcome variables

Plasma levels of endostatin, SDF1 and PDGF

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20191228045916N1**

Registration date: **2020-02-04, 1398/11/15**

Registration timing: **retrospective**

Last update: **2020-02-04, 1398/11/15**

Update count: **0**

Registration date

2020-02-04, 1398/11/15

Registrant information

Name

Hadi Seyedi

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 35 1763 0790

Email address

h.seyedi@iau-neyshabur.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2019-09-07, 1398/06/16

Expected recruitment end date

2019-10-12, 1398/07/20

Actual recruitment start date

2019-09-07, 1398/06/16

Actual recruitment end date

2019-10-12, 1398/07/20

Trial completion date

2019-10-12, 1398/07/20

Scientific title

Effect of cardiac rehabilitation on level of endostatin, SDF1 and PDGF in patients with atherosclerosis after CABG

Public title

Effect of cardiac rehabilitation on level of endostatin, SDF1 and PDGF in patients with atherosclerosis after CABG

Purpose

Supportive

Inclusion/Exclusion criteria

Inclusion criteria:

Being a man Aged 40 to 60 years Performing a coronary artery bypass graft in the past two months

Exclusion criteria:

Chest pain Hypertension disorder Diabetes

Age

From **40 years** old to **60 years** old

Gender

Male

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **30**

Actual sample size reached: **24**

Randomization (investigator's opinion)

Randomized

Randomization description

The simple and easy design method is used with the design of the numeric table.

Blinding (investigator's opinion)

Not blinded

Blinding description**Placebo**

Not used

Assignment

Parallel

Other design features

Use of Aerobic-Resistance Combined Exercise Method

Secondary Ids

empty

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

Ethics Committee of Neyshabur University

Street address

Khorasan Razavi Province, Neyshabur, Abbey Road

City

neyshabur

Province

Razavi Khorasan

Postal code

9319975853

Approval date

2019-09-05, 1398/06/14

Ethics committee reference number

IR.IAU.NEYSHABUR.REC.1398.018

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

Patients aged 60-40 years who underwent coronary

artery bypass graft surgery

ICD-10 code**ICD-10 code description****Primary outcomes****1****Description**

endostatin

Timepoint

Blood sampling in the pre-test phase 24 hours before the first training session and 48 hours after the last training session

Method of measurement

Blood sampling from brachial vein and testing by Real-Time-PCR

2**Description**

SDF1

Timepoint

Blood sampling in the pre-test phase 24 hours before the first training session and 48 hours after the last training session

Method of measurement

Blood sampling from brachial vein and testing by Real-Time-PCR

3**Description**

PDGF

Timepoint

Blood sampling in the pre-test phase 24 hours before the first training session and 48 hours after the last training session

Method of measurement

Blood sampling from brachial vein and testing by Real-Time-PCR

Secondary outcomes

empty

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

Intervention group: Patients aged 40-60 years who underwent coronary artery bypass graft surgery and received aerobic-resistance combined exercise intervention.

Category

Rehabilitation

2**Description**

Control group: Control group: Patients aged 40-60 years who underwent coronary artery bypass graft surgery and

did not receive aerobic resistance training.

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Mashhad Javad Alameh Hospital

Full name of responsible person

Dr. Emad Alavi Nia

Street address

Vakilabad Boulevard, Conservatory Road

City

mashhad

Province

Razavi Khorasan

Postal code

9178613111

Phone

+98 51 6010 3881

Fax

+98 51 8103 3883

Email

info@jhosp.org

Web page address

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Islamic Azad University

Full name of responsible person

rambod khajee

Street address

Khorasan Razavi Province, Neyshabur, Abbey Road

City

neyshabur

Province

Razavi Khorasan

Postal code

9319975853

Phone

+98 51 4262 1901

Fax

Email

neyshabur@iau-neyshabur.ac.ir

Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?

Yes

Title of funding source

Islamic Azad University

Proportion provided by this source

1

Public or private sector

Private

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

Islamic Azad University

Full name of responsible person

seyed hadi seyedi

Position

coach

Latest degree

Master

Other areas of specialty/work

Sport Medicine

Street address

Adel Khomeini Street, Adel Khomeini 67, No. 33

City

mashhad

Province

Razavi Khorasan

Postal code

9174884641

Phone

+98 51 3763 0790

Email

seyedi9@gmail.com

Person responsible for scientific inquiries

Contact

Name of organization / entity

Islamic Azad University

Full name of responsible person

seyed hadi seyedi

Position

coach

Latest degree

Master

Other areas of specialty/work

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Phone

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Email

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Person responsible for updating data

Contact

Name of organization / entity

Islamic Azad University

Full name of responsible person

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Sharing plan

Deidentified Individual Participant Data Set (IPD)

Undecided - It is not yet known if there will be a plan to

make this available

Study Protocol

Yes - There is a plan to make this available

Statistical Analysis Plan

Yes - There is a plan to make this available

Informed Consent Form

Yes - There is a plan to make this available

Clinical Study Report

Not applicable

Analytic Code

Not applicable

Data Dictionary

Not applicable

Title and more details about the data/document

Only part of the data related to the original outcome is shared

When the data will become available and for how long

1 year after publishing the results

To whom data/document is available

Researchers working in academia and people in the industry

Under which criteria data/document could be used

Certain conditions are not considered

From where data/document is obtainable

Communication with the responsible person

What processes are involved for a request to access data/document

Via email address

Comments