

Clinical Trial Protocol

Iranian Registry of Clinical Trials

03 Aug 2026

The effect of cardiac and respiratory rehabilitation in the second phase of cardiac rehabilitation on the quality of life of patients undergoing coronary artery bypass graft surgery

Protocol summary

Study aim

Determination of the effect of pulmonary cardiac rehabilitation in the second phase of cardiac rehabilitation on the quality of life of patients undergoing coronary artery bypass graft surgery

Design

Clinical practice with control group, with parallel groups, randomized

Settings and conduct

Department of Cardiac Rehab in Imam Reza Hospital, Mashhad

Participants/Inclusion and exclusion criteria

Entry requirements: Age aged 65-18 years The first experience of coronary artery bypass graft surgery EF equal to or greater than 25% No major respiratory illness, such as asthma, bronchiectasis, and COPD No history of participation in the cardiac rehab program No smoking and tobacco at the moment Not a history of any vascular surgery Conditions of non-arrival: Cancellation of the continuation of the program Abandonment more than twice in the rehab program Stressful life events (deaths of first class relatives, financial bankruptcy, severe family)

Intervention groups

In the control group, 10 sessions of 1.5 hours were performed on routine in the cardiac rehabilitation program, which included treadmill, fixed bicycle and arm restraint, and in the intervention group after each intervention, the cardiac rehab program was performed for 20-30 minutes Under the lung rehab program, including deep breathing and effective cough, motivational spirometry, lung function, upper and lower extremity exercises and resistance exercises, as well as training for these exercises at home.

Main outcome variables

respiratory muscle strength, lung capacity, quality of life

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20190707044132N1**

Registration date: **2019-10-27, 1398/08/05**

Registration timing: **registered_while_recruiting**

Last update: **2019-10-27, 1398/08/05**

Update count: **0**

Registration date

2019-10-27, 1398/08/05

Registrant information

Name

Mahjobe Akar

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 11 3252 3972

Email address

akarm961@mums.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2019-08-23, 1398/06/01

Expected recruitment end date

2020-02-20, 1398/12/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of cardiac and respiratory rehabilitation in the second phase of cardiac rehabilitation on the quality of life of patients undergoing coronary artery bypass graft surgery

Public title

cardiac and respiratory rehabilitation

Purpose

Education/Guidance

Inclusion/Exclusion criteria**Inclusion criteria:**

Age between 65-18 years The first experience of coronary artery bypass graft surgery EF equal to or greater than 25% No major respiratory illness, such as asthma, bronchiectasis, and COPD No history of participation in the cardiac rehab program No smoking and tobacco now No history of any thoracic surgery Having the ability to communicate verbally Having reading and writing skills No known psychological disorder

Exclusion criteria:

Cancel to continue to participate Abandonment more than twice in the rehab program Occurrence of pleural effusion and cardiogenic pulmonary edema Life-threatening events (deaths of first class relatives, financial bankruptcy, severe family members' illness) Prohibition of rehabilitation according to a cardiologist or rehab

Age

From **18 years** old to **65 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **60**

Randomization (investigator's opinion)

Randomized

Randomization description

Randomization Method: Time Blocking Randomization
Tool: SPSS statistical software

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 Mashhad University Of Medical Sciences

Street address

Mashhad Nursing And Midwifery Schole, Ebne Sina St

City

Mashhad

Province

Razavi Khorasan

Postal code

9177948959

Approval date

2019-05-18, 1398/02/28

Ethics committee reference number

IR.MUMS.NURSE.REC.1398.015

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

Pulmonary Rehab, Cardiac Rehab, Open Heart Surgery

ICD-10 code

I24

ICD-10 code description

Other acute ischemic heart diseases

Primary outcomes**1****Description**

Quality of Life Score in Power and Ferrans Questionnaire

Timepoint

Measure the quality of life score at the beginning of the intervention and the session of ten interventions

Method of measurement

Power and Ferrans Quality of Life Score Questionnaire

Secondary outcomes

empty

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

Intervention group: Patients undergo pulmonary rehabilitation for 20-30 minutes after each session of cardiac rehabilitation program, including deep breathing and effective coughing, motivational spirometry, pulmonary exercise, upper and lower extremity exercises, and resistance training.

Category

Other

2**Description**

Control group: Patients attend a 10-hour 1.5-hour routine routine cardiac rehabilitation program that includes a

treadmill, a stationary bike, and an ergometer arm.
Category
Other

Recruitment centers

1

Recruitment center

Name of recruitment center
Imam Reza Hospital
Full name of responsible person
Seyed Reza Mazlum
Street address
ebne sina st
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9177948959
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Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Mashhad University of Medical Sciences
Full name of responsible person
Robabeh Latifnezhad
Street address
Ebne- Sina Street, School of Nursing and Midwifery
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mazlomr@mums.ac.ir
Web page address
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
No
Title of funding source
Mashhad university of medical science
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
Mashhad University of Medical Sciences
Full name of responsible person
Seyed Reza Mazlum
Position
Academic staff
Latest degree
Master
Other areas of specialty/work
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Person responsible for scientific inquiries

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Person responsible for updating data

Contact

Name of organization / entity

Mashhad University of Medical Sciences

Full name of responsible person

mahjobe akar

Position

Student of Internal Surgery Nursing

Latest degree

Bachelor

Other areas of specialty/work

Nursery

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akarm961@mums.ac.ir

Sharing plan

Deidentified Individual Participant Data Set (IPD)

Yes - There is a plan to make this available

Study Protocol

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

Statistical Analysis Plan

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

Informed Consent Form

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

Clinical Study Report

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

Analytic Code

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

Data Dictionary

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

Title and more details about the data/document

All potential data can be shared after unidentifiable people

When the data will become available and for how long

Start of access period 6 months after printing results

To whom data/document is available

For researchers working only in academic and scientific institutions

Under which criteria data/document could be used

Health Centers

From where data/document is obtainable

Mashhad School of Nursing and Midwifery

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

Immediately by visiting the library of Mashhad School of Nursing and Midwifery

Comments