Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

The effect of incentive spirometry, knowing oxygenation in patients after coronary artery bypass surgery

Protocol summary

Summary

The main objective of this study is to determine the effect of incentive spirometry , knowing oxygenation in patients after coronary artery bypass graft surgery . Inclusion criteria : elective coronary artery bypass graft surgery; coronary artery bypass graft surgery is not an emergency; no history of previous coronary artery bypass graft surgery; no neurological disorders - muscular or cognitive impairments; pulmonary disease; ability Spirometry; written and informed consent to participate in the study. Exclusion criteria : congestive heart failure; severe respiratory failure; reoperation;sternal infection; need for mechanical ventilation for more than 48 hours;the patient died. The study sample of 70 patients candidat coronary artery disease surgery were randomly divided into two groups will perform. Spirometry was used in the intervention group and in the hospital routine will be applied. Expect to use incentive spirometry is effective in improving oxygenation in patients.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2013102015073N1**
Registration date: **2013-11-16, 1392/08/25**
Registration timing: **registered_while_recruiting**

Last update:
Update count: **0**

Registration date

2013-11-16, 1392/08/25

Registrant information

Name

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Name of organization / entity

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Recruitment status

Recruitment complete

Funding source

Research Council of Yazd University of Medical Sciences

Expected recruitment start date

2013-11-01, 1392/08/10

Expected recruitment end date

2013-12-31, 1392/10/10

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of incentive spirometry, knowing oxygenation in patients after coronary artery bypass surgery

Public title

The effect of incentive spirometry, knowing oxygenation in patients after coronary artery bypass surgery

Purpose

Health service research

Inclusion/Exclusion criteria

Inclusion criteria: elective coronary artery bypass graft surgery; coronary artery bypass graft surgery is not an emergency; no history of previous coronary artery bypass graft surgery; no neurological disorders - muscular or cognitive impairment; preoperative pulmonary disease lack the ability Spirometry performed; ventricular ejection fraction greater than 35% of output; written informed consent to participate in the study.

Exclusion criteria: congestive heart failure; severe respiratory failure; reoperation; sternal infection; need for mechanical ventilation for more than 48 hours; the patient died.

Age
From **18 years** old to **90 years** old

Gender
Both

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **70**

Randomization (investigator's opinion)
Randomized

Randomization description

Blinding (investigator's opinion)
Single blinded

Blinding description

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Yazd University of Medical Sciences

Street address
Headquarters Yazd University, Bahonar Square,Yazd

City
Yazd

Postal code
8916877443

Approval date
2013-09-03, 1392/06/12

Ethics committee reference number
104943/1/17/پ

Health conditions studied

1

Description of health condition studied
Coronary Atrial Bypass Graft Pations

ICD-10 code
I25.1

ICD-10 code description
Atherosclerotic heart disease

Primary outcomes

1

Description
Arterial Blood Gas values

Timepoint
Before induction of anesthesia in the operating room, the first and second day after surgery

Method of measurement
Arterial blood gas sample get in the time scales considered and this is analyzed using Nova Biomedichal machine

Secondary outcomes

empty

Intervention groups

1

Description
In the intervention group:24 hours before surgery and use of incentive spirometry device is functioning properly , the patient was given a full explanation by the researcher from the patient will be asked to perform incentive spirometry . Then ensure the appropriate use of spirometry incentive،after coronary artery bypass graft surgery patients were extubated after a time , she/he began spirometry and 10 times per hour at the time, thus awakening a deep breath spirometry done about 2 seconds, then exhale and hold to do. between each time we do rest about 10 seconds .

Category
Rehabilitation

2

Description
In Ontrol group: Routine is applied in hospitals for patients who have already attempted before surgery is performed after the operation policy for the use of Spirometry including frequency of use, monitor used is not correct.

Category
N/A

Recruitment centers

1

Recruitment center

Name of recruitment center
Afshar Hospital Yazd

Full name of responsible person
Mrs. H. Dehghani

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Yazd University of Medical Sciences, School of Nursing

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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Research Council of Yazd University of Medical Sciences
Full name of responsible person
Dr.f.Ezoddin
Street address
Research Council of Yazd University of Medical Sciences
City
Yazd
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Research Council of Yazd 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

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Person responsible for updating data

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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