

Clinical Trial Protocol

Iranian Registry of Clinical Trials

11 Sep 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

Mohammad Hadi Zahmatkesh Saredorahy

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

Street address

Yazd University of Medical Sciences, School of Nursing

City

Yazd

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

Contact

Name of organization / entity

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Full name of responsible person

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Position

Student nurse in master of critical care nursing

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Web page address

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