Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

The impact of planned breathing exercise on respiratory complication in patients after coronary artery bypass surgery in Shahid Rajaei training, research and treatmtnt heart center

Protocol summary

Summary

This study is conducted for evaluating the effect of planned breathing exercises on pulmonary complication in patients undergoing Coronary artery bypass surgery in Shahid Rajaei Heart Center. In this study 100 patients who are candidate for CABG randomly allocated to groups of experiment and control. Patients who had emergency surgery and neuromuscular and cognitive disorders will not be studied. Patients who are allocated in experiment group will receive planned breathing exercises including deep breathing, incentive spirometr and directed cough maneuvers. This breathing exercise is initiated one hour after extubation and will be done in the first four days after surgery. Patients who are allocated in control group will receive the hospital routine treatment. For comparing the outcomes ABG, atelectasis in chest x ray and distance walked in 6 minute will be compared. Arterial blood gasses and chest X ray will be compared pre operation and first, second and third day post operatively.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201106126778N1**
Registration date: **2011-06-25, 1390/04/04**
Registration timing: **retrospective**

Last update:
Update count: **0**

Registration date

2011-06-25, 1390/04/04

Registrant information

Name

Seyed Tayeb Moradian Vafaei

Name of organization / entity

School of nursing and midwifery, Tehran university of medical sciences

Country

Iran (Islamic Republic of)

Phone

+98 21 2303 4258

Email address

t-moradian@razi.tums.ac.ir

Recruitment status

Recruitment complete

Funding source

School of Nursing and Midwifery of Tehran University of Medical Sciences Research Center

Expected recruitment start date

2010-12-22, 1389/10/01

Expected recruitment end date

2011-03-22, 1390/01/02

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The impact of planned breathing exercise on respiratory complication in patients after coronary artery bypass surgery in Shahid Rajaei training, research and treatmtnt heart center

Public title

Planned breathing exercises and reducing the pulmonary complications in patients undergoing coronary artery bypass graft surgery

Purpose

Prevention

Inclusion/Exclusion criteria

Incluson criteria: Negative history of neurological disorders; muscular or cognitive disorders; no emergency surgery; negative history of previous CABG; Lack of preoperative pulmonary disease (pneumonia, chronic obstructive pulmonary disease, atelectasis, pleural effusion and asthma); the ability to perform planned breathing exercises; negative history of severe renal dysfunction) Exclusion criteria: need for mechanical ventilation more than 24 hour; need for reopration due to surgery complications; Patient refusal of further participation in the study at any stage of the work; incidence of cognitive and neurological disorders after surgery; severe hemodynamic impairment

Age
No age limit
Gender
Both

Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: **100**
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
School of nursing and midwifery, Tehran University of Medical Sciences
Street address
School of Nursing and Midwifery, Towhid Square
City
Tehran
Postal code
Approval date
2010-11-21, 1389/08/30
Ethics committee reference number
250.522

Health conditions studied

1

Description of health condition studied
Atelectasis
ICD-10 code
J98.1
ICD-10 code description
Pulmonary collapse

Primary outcomes

1

Description
Atelectasis
Timepoint
Daily
Method of measurement
Chest x ray

Secondary outcomes

1

Description
Phyasical function
Timepoint
the fourth day after intervention
Method of measurement
six minute walking test

Intervention groups

1

Description
Patients who are allocated to control group will receive the hospital routine treatment
Category
Prevention

2

Description
Patients who are allocated to experiment group will receive planned breathing exercises including deep breathing, incentive spirometer and directed cough maneuvers. This breathing exercise is initiated one hour after extubation and will be done in the first four days after surgery.
Category
Prevention

Recruitment centers

1

Recruitment center
Name of recruitment center
Sahahid Rajaei education, research and therapy center
Full name of responsible person

Dr Majid Haghgoo

Street address

the intersection Niayesh, Vali Asr Street

City

Tehran

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

School of Nursing and Midwifery of Tehran University of Medical Sciences Research Center

Full name of responsible person

Dr Neda Mehrdad

Street address

School of Nursing and Midwifery, Towhid Square

City

Tehran

Grant name

Grant code / Reference number

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

Yes

Title of funding source

School of Nursing and Midwifery of Tehran University of Medical Sciences Research Center

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

Person responsible for scientific inquiries

Contact

Name of organization / entity

School of nursing and midwifery, Tehran University of Medical Sciences

Full name of responsible person

Seyed Tayeb Moradian

Position

MSc student of critical care nursing

Other areas of specialty/work

Street address

School of Nursing and Midwifery, Towhid Square

City

Tehran

Postal code

Phone

+98 989123781448

Fax

Email

t-moradian@razi.tums.ac.ir, t.moradyan@yahoo.com

Web page address

Person responsible for updating data

Contact

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