Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Effects of pulmonary rehabilitation before and after open cardiac surgery on respiratory function

Protocol summary

Summary
It seems that inspiratory muscles training (IMT) can improve rehabilitation process of patients that are candidate for open heart surgery. We want to compare the outcomes of pulmonary function of patients with spirometry, arterial blood gases (ABG), 6 minutes walking test (6MWT) between 2 groups of them with and without IMT performed before surgery. We will perform inspiratory muscles training for 30 patients for 15 sessions before surgery and compare outcomes among them and control group (each 30 patients). Inclusion criteria are patients that undergo open heart surgery. Exclusion criteria are: 1.history of chronic obstructive pulmonary disease (COPD), 2.emergent surgery, 3.history of congestive heart failure (CHF).

General information

Acronym
IRCT registration information
IRCT registration number: **IRCT138904294422N1**
Registration date: **2010-09-28, 1389/07/06**
Registration timing: **registered_while_recruiting**

Last update:
Update count: **0**
Registration date
2010-09-28, 1389/07/06

Registrant information
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Seyed Kazem Shakouri
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Tabriz University of Medical Sciences
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Recruitment status
Recruitment complete
Funding source
Tabriz university of medical scinces

Expected recruitment start date
2010-08-23, 1389/06/01
Expected recruitment end date
2011-08-29, 1390/06/07
Actual recruitment start date
empty
Actual recruitment end date
empty
Trial completion date
empty

Scientific title
Effects of pulmonary rehabilitation before and after open cardiac surgery on respiratory function

Public title
Effects of pulmonary rehabilitation before and after open cardiac surgery on respiratory function
Purpose
Supportive
Inclusion/Exclusion criteria
Inclusion criteria: patients that undergo open cardiac surgery. Exclusion criteria: 1.Chronic obstructive pulmonary disease (COPD), 2.emergency surgery, 3.Congestive heart failure (CHF).
Age
No age limit
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
Blinding (investigator's opinion)
Triple blinded
Blinding description
Placebo
Not used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Vice chancellor for research of Tabriz universityn of medical sciences
Street address
Tabriz university of medical sciences
City
Tabriz
Postal code
Approval date
2010-07-05, 1389/04/14
Ethics committee reference number
2722/4/5

Health conditions studied

1

Description of health condition studied
Patients that undergo open heart surgery
ICD-10 code
I25.1
ICD-10 code description
Atherosclerotic heart disease

Primary outcomes

1

Description
effect on spirometry
Timepoint
15 days
Method of measurement
Spirometry instrument

Secondary outcomes

1

Description
Arterial Blood Gases (ABG)
Timepoint
according to ward routin evaluations
Method of measurement
ABG instrument

Intervention groups

1

Description
1.Cervical and shoulder mobilization, 2.Respiratory exercises, 3.IS training and cough training, 4.Stretching exercises of shoulder.
Category
Rehabilitation

2

Description
Control group: Incentive spirometry training and effective cough training.
Category
Rehabilitation

Recruitment centers

1

Recruitment center
Name of recruitment center
Tabriz Shaheed Madani hospital
Full name of responsible person
Street address
City
Tabriz

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Tabriz university of medical sciences
Full name of responsible person
Dr. Rasool Azarfarin
Street address
Vice chancellor for research of Tabriz university of medical sciences
City
Tabriz
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Tabriz 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

Tabriz university of medical sciences

Full name of responsible person

Dr. Seyyed Kazem Shakoury

Position

Head of physical medicine ward

Other areas of specialty/work

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Full name of responsible person

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Position

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Street address

City

Postal code

Phone

Fax

Email

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