

Clinical Trial Protocol

Iranian Registry of Clinical Trials

12 Jul 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

Name

Seyed Kazem Shakouri

Name of organization / entity

Tabriz University of Medical Sciences

Country

Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

Tabriz university of medical sciences

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 university 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 routine 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

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**Street address**Physical medicine and rehabilitation ward, Tabriz
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Fax**Email**shakourik@tbzmed.ac.ir ,
jamalsoleimani56@yahoo.com**Web page address****Person responsible for scientific inquiries****Contact****Name of organization / entity**Physical medicine and rehabilitation ward of Emam
Reza hospital**Full name of responsible person**

Dr. Seyyed Kazem Shakoury

Position

Physical medicine and rehabilitation professional, MD

Other areas of specialty/work**Street address**

Emam Reza hospital, University street

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Dr. Seyyed Kazem Shakouri

Position**Other areas of specialty/work****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*