

Clinical Trial Protocol

Iranian Registry of Clinical Trials

12 Jul 2026

Evaluating the effects of respiratory rehabilitation before mitral valve surgery on the prevention of respiratory functions and complications and length of stay during admission in intensive car

Protocol summary

Study aim

Determination of the effect of respiratory training prior to mitral valve surgery in the prevention of impaired function and respiratory complications and duration of admission to special care units

Design

Clinical trial with control group, with parallel groups, blind, randomized

Settings and conduct

Sampling from patients referring to the Shahid Rajaei Cardiology Center in Tehran, which requires a mitral valve surgery (with / without need for treoscipine valve surgery) to be diagnosed by a specialist. Patients will be randomly assigned to one of the two groups. One-way blind is used, and the Surgeonis unaware of the control.

Participants/Inclusion and exclusion criteria

The criteria for admission to the project are: at least 18 years of age, left ventricular drainage fraction (LVEF) under 55% that will be measured by echocardiography, and no recent surgery of the heart or chest, and no musculoskeletal disorders and asthma And chronic obstructive pulmonary disease. Also, the exclusion criteria of the project are: recent surgery of the heart or chest, musculoskeletal disorders, asthma, chronic obstructive pulmonary disease (COPD), chronic pulmonary disease such as bronchitis, recent pulmonary infection, use of suppressing drugs Safety and non-consent of the patient by entering the plan and the terms of the consent form.

Intervention groups

For 30 days before surgery, the group carries out a non-exercise physiotherapy intervention (using a power brathe machine). The control group does not perform respiratory physiotherapy.

Main outcome variables

Duration of hospitalization in the field of intensive care and postoperative complications of mitral valve surgery.

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20180430039480N1**

Registration date: **2018-07-30, 1397/05/08**

Registration timing: **registered_while_recruiting**

Last update: **2018-07-30, 1397/05/08**

Update count: **0**

Registration date

2018-07-30, 1397/05/08

Registrant information

Name

Mandana Mashhadijafari

Name of organization / entity

University of Haspital Rajaei

Country

Iran (Islamic Republic of)

Phone

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Email address

mandanajafari1348@rhc.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2018-06-10, 1397/03/20

Expected recruitment end date

2019-03-20, 1397/12/29

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty	
Scientific title	Evaluating the effects of respiratory rehabilitation before mitral valve surgery on the prevention of respiratory functions and complications and length of stay during admission in intensive car
Public title	Evaluating the effects of respiratory rehabilitation before mitral valve surgery on the prevention of respiratory functions and complications and length ofstay during admission in intensive car
Purpose	Prevention
Inclusion/Exclusion criteria	
Inclusion criteria:	The criteria for entering the plan are: at least 18 years of age, left ventricular ejection fraction (LVEF) below 55% that will be measured by echocardiography, and no recent surgery of the heart or chest, and no musculoskeletal disorders and Asthma and Chronic Obstructive Pulmonary Disease
Exclusion criteria:	Exit criteria for a patient include: recent surgery of the heart or chest, musculoskeletal disorders, asthma, chronic obstructive pulmonary disease (COPD), chronic pulmonary disease, such as bronchitis, recent pulmonary infections, use of suppressing drugs and Disagreement with the patient entering the plan and the terms of the consent form
Age	From 18 years old to 65 years old
Gender	Both
Phase	N/A
Groups that have been masked	Care provider
Sample size	Target sample size: 30
Randomization (investigator's opinion)	Randomized
Randomization description	Randomize block.
Blinding (investigator's opinion)	Single blinded
Blinding description	The only surgery that performs mitral valve surgery is the unconsciousness of the patient's involvement in the intervention or control group.
Placebo	Not used
Assignment	Parallel
Other design features	
Secondary Ids	empty

Ethics committees	
1	
Ethics committee	
Name of ethics committee	IR.RHC.REC.1397.003
Street address	Valiasr Street. Corner of prayer. Shahid Rajaei Cardiovascular Research Center
City	Tehran
Province	Tehran
Postal code	1741746194
Approval date	2018-04-28, 1397/02/08
Ethics committee reference number	IR.RHC.REC.1397.003
Health conditions studied	
1	
Description of health condition studied	Miter's disease of the heart
ICD-10 code	
ICD-10 code description	
Primary outcomes	
1	
Description	Duration of admission to the intensive care unit
Timepoint	30 days
Method of measurement	Hospital hours in the intensive care unit
Secondary outcomes	
1	
Description	Function and respiratory complications
Timepoint	The examination is done prior to the onset of intervention and 30 days of respiratory physiotherapy.
Method of measurement	6 minutes walk and lung radiography
Intervention groups	
1	
Description	The intervention group performs respiratory physiotherapy with the power brath before the 30-day operation.

Category

Prevention

2**Description**

Control group: The control group receives all necessary measures and care. They do not receive pre-operative physiotherapy.

Category

Prevention

Recruitment centers**1****Recruitment center****Name of recruitment center**

Shahid Rajaee Cardiology Hospital Tehran

Full name of responsible person

Mandana Mashhadi Jafari

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Valiasr Street. The Hospital of Shahid Rajaee
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Sponsors / Funding sources**1****Sponsor****Name of organization / entity**

Shaheed Rajaee cardiovascular research center

Full name of responsible person

Dr. Majid Maleki

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Web page address**Grant name****Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

Title of funding source

Shaheed Rajaee cardiovascular research center

Proportion provided by this source

100

Public or private sector

Private

Domestic or foreign origin

Domestic

Category of foreign source of funding

empty

Country of origin**Type of organization providing the funding**

Academic

Person responsible for general inquiries**Contact****Name of organization / entity**

Shahid Rajaee Cardiovascular Research Center
Tehran

Full name of responsible person

Mandana Mashhadi Jafari

Position

Student Masters Degree

Latest degree

Master

Other areas of specialty/work

Nursery

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Person responsible for scientific inquiries**Contact****Name of organization / entity**

Research Center for Therapeutic Therapy for Heart
and Rajaji Teva in Tehran

Full name of responsible person

Mandana Mashhadi Jafari

Position

Student Master's Degree Nursing

Latest degree

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Other areas of specialty/work

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Person responsible for updating data

Contact

Name of organization / entity
Research Center for Cardiovascular Research, Rajai
University of Tehran
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Student Master's Degree Nursing
Latest degree
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Valiasr Street. The City of Rajaei Heart Hospital
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Province

Sharing plan

Deidentified Individual Participant Data Set (IPD)

No - There is not a plan to make this available

Justification/reason for indecision/not sharing IPD

No more information

Study Protocol

No - There is not a plan to make this available

Statistical Analysis Plan

No - There is not a plan to make this available

Informed Consent Form

No - There is not a plan to make this available

Clinical Study Report

No - There is not a plan to make this available

Analytic Code

Not applicable

Data Dictionary

Not applicable