

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

The effect of respiratory physiotherapy by nurses on pain, oxygenation, hemodynamic indexes and inspiratory capacity after coronary artery bypass surgery

Protocol summary

Summary

This study was conducted to evaluate the effects of chest physiotherapy by nurses on pain, oxygenation, and hemodynamic indexes and inspiratory capacity in patients after coronary artery bypass surgery. In this controlled clinical trial, 60 patients undergoing open heart surgery at the hospital of Imam Reza (AS) in Mashhad will be selected with available sampling method and then randomly will be divided into two groups (physiotherapy by nurses and physiotherapy by routine group (physiotherapists)). variables Such as pain, hemoglobin oxygen saturation, p/f ratio, mean arterial pressure, heart rate, pulse pressure and inspiratory capacity before, during and after intervention in both groups will be measured; and then within group and between group Comparison will be done.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2015020820994N1**
Registration date: **2015-06-15, 1394/03/25**
Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2015-06-15, 1394/03/25

Registrant information

Name

Hadi Roshani Yosefabad

Name of organization / entity

Nursing and Midwifery Faculty, Mashhad University of Medical Sciences

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Recruitment status

Recruitment complete

Funding source

mashhad university of medical science

Expected recruitment start date

2014-11-22, 1393/09/01

Expected recruitment end date

2015-03-19, 1393/12/28

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The effect of respiratory physiotherapy by nurses on pain, oxygenation, hemodynamic indexes and inspiratory capacity after coronary artery bypass surgery

Public title

The effect of physiotherapy in the prevention of complications after surgery.

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria include: patients undergoing coronary artery bypass surgery without cardiopulmonary pump technique, hemodynamic conditions are stable and do not have preoperative pulmonary diseases. Exclusion criteria include: during the study hemodynamic situation is unstable and during the study there is need to intubation, CPR, or receiving inotropic support.

Age

From **18 years** old to **65 years** old

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)**

Not blinded

Blinding description**Placebo**

Not used

Assignment

Parallel

Other design features**Secondary Ids**

empty

Ethics committees**1****Ethics committee****Name of ethics committee**

The committee ethics in research Mashhad University
Of Medical Science

Street address

Research ethics committee, GHorayshi building,
University Avenue, Mashhad,Iran

City

Mashhad

Postal code**Approval date**

2014-11-22, 1393/09/01

Ethics committee reference number

930481

Health conditions studied**1****Description of health condition studied**

physiotherapy

ICD-10 code

z50

ICD-10 code description

Care involving use of rehabilitation procedures

Primary outcomes**1****Description**

Pain

Timepoint

Before, during and immediately after the intervention

Method of measurement

Numerical Rating Scale of pain

2**Description**

Oxygen Saturation Of Hemoglobin

Timepoint

Before, during and immediately after the intervention

Method of measurement

Pulse oxymetry

3**Description**

P/F Ratio

Timepoint

Before and immediately after the intervention

Method of measurement

With formula (Pao_2/Fio_2)

4**Description**

Mean Arterial Pressure (MAP)

Timepoint

Before, during and immediately after the intervention

Method of measurement

With monitoring of saadat

5**Description**

Heart Rate

Timepoint

Before, during and immediately after the intervention

Method of measurement

With monitoring of saadat

6**Description**

Pulse Pressure

Timepoint

Before, during and immediately after the intervention

Method of measurement

With formula (systolic blood pressure- diastolic blood pressure)

7**Description**

Inspiratory Capacity

Timepoint

Before and immediately after the intervention

Method of measurement

With volumetric exerciser model : respiflo vs 5000

Secondary outcomes

empty

Intervention groups

1

Description

Chest physiotherapy with nursing protocol of physiotherapy intervention (in intervention group)

Category

Prevention

2

Description

Chest physiotherapy by physiotherapist (control group)

Category

Prevention

Recruitment centers

1

Recruitment center

Name of recruitment center

Emam Reza(A.S.) Hospital

Full name of responsible person

Hadi Roshani

Street address

Nursing and Midwifery Faculty, Ebne Sina Avenue, Mashhad, Iran

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Mashhad

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Mashhad University of Medical Science

Full name of responsible person

Dr. Saeed Eslami

Street address

GHorayshi building, Daneshgah avenue, Mashhad, Iran

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Mashhad

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Mashhad University of Medical Science

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

Nursing and Midwifery Faculty

Full name of responsible person

Hadi Roshani

Position

Master of Nursing Student

Other areas of specialty/work

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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