Clinical Trial Protocol
Iranian Registry of Clinical Trials

10 Jun 2026

The comparison of Propofol and Isoflurane on arterial oxygenation pressure, mean arterial pressure and heart rate variations following one-lung ventilation in thoracic surgeries

Protocol summary

Summary

Objectives: Determination and comparison of effect of Propofol and Isoflurane on arterial oxygenation pressure, mean arterial pressure and heart rate variations following one-lung ventilationin thoracic surgeries Design: Randomized, not-blinded, Target sample size 61 people. The major inclusion criteria: The age range of 18-75 years old; ASA class I (Healthy person) and III (Severe systemic disease); The consent to undergo thoracic surgery with OLV, according to the study conditions The major exclusion criteria: Liver malfunction (Aspartate transaminase (AST) more than 40, Alanine transaminase (ALT) more than 40); Ischemic or valvular heart disease (history of cardiovascular diseases, physical status, Electrocardiogram (EKG) and echocardiography of the patients were analyzed); Recent use of anesthetic medications; Obstructive and end-stage restrictive pulmonary disease; Patients with one-lung ventilationin (OLV) less than 30 min; Patients with End -Tidal CO2 (ETCO2) more than 45 mmHg, and the respiratory rate of 12 breaths per minute; Patients who have pathological problems in the left lung (pulmonary), according to High Resolution Computed Tomography (HRCT) and pulmonary function tests (PFT) before the surgery. Intervention group: Intervention group: propofol (100 µg/kg/min), During Surgery. Control group: Control group: one Mac (1.1%) isoflurane, During surgery. Primary outcome measure: mean pressure of arterial oxygen and Mean Arterial pressure and Heart rate, During two lung ventilation and in 5, 10 and 20 minute after one lung ventilation.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2013122615942N1**

Registration date: **2014-02-03, 1392/11/14**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2014-02-03, 1392/11/14

Registrant information

Name

Mohammad Reza Rhnama Zadeh

Name of organization / entity

Ghaem Hospital

Country

Iran (Islamic Republic of)

Phone

+98 51 1768 7898

Email address

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Recruitment status

Recruitment complete

Funding source

Vice Chancellor for Research of Mashhad University of Medical Sciences

Expected recruitment start date

2012-02-01, 1390/11/12

Expected recruitment end date

2013-02-01, 1391/11/13

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The comparison of Propofol and Isoflurane on arterial

oxygenation pressure, mean arterial pressure and heart rate variations following one-lung ventilation in thoracic surgeries

Public title
Propofol and Isoflurane effects in thoracic surgeries
Purpose
Treatment
Inclusion/Exclusion criteria
The major inclusion criteria: The age range of 18-75 years old; ASA class I (Healthy person) and III (Severe systemic disease); The consent to undergo thoracic surgery with OLV, according to the study conditions The major exclusion criteria: Liver malfunction (Aspartate transaminase (AST) more than 40, Alanine transaminase (ALT) more than 40); Ischemic or valvular heart disease (history of cardiovascular diseases, physical status, Electrocardiogram (EKG) and echocardiography of the patients were analyzed); Recent use of anesthetic medications; Obstructive and end-stage restrictive pulmonary disease; Patients with one-lung ventilationin (OLV) less than 30 min; Patients with End -Tidal CO2 (ETCO2) more than 45 mmHg, and the respiratory rate of 12 breaths per minute; Patients who have pathological problems in the left lung (pulmonary), according to High Resolution Computed Tomography (HRCT) and pulmonary function tests (PFT) before the surgery.
Age
From **18 years** old to **75 years** old
Gender
Both

Phase
2
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
Ethics Committee of Mashhad University of Medical Sciences
Street address
Vice Chancellor for Research of Mashhad University of Medical Sciences, Ghoreishi Building, Daneshgah street, Mashhad
City
Mashhad
Postal code
Approval date
2013-02-02, 1391/11/14
Ethics committee reference number
910182

Health conditions studied

1

Description of health condition studied
Anasthesia
ICD-10 code
Y48.4
ICD-10 code description
Anaesthetic, unspecified

Primary outcomes

1

Description
mean pressure of arterial oxygen
Timepoint
During two lung ventilation and in 5, 10 and 20 minute after one lung ventilation
Method of measurement
ABG Test by GEM premier 3000

2

Description
Mean Arterial pressure
Timepoint
During two lung ventilation and in 5, 10 and 20 minute after one lung ventilation
Method of measurement
ABG Test by GEM premier 3000

3

Description
Heart Rate
Timepoint
During two lung ventilation and in 5, 10 and 20 minute after one lung ventilation
Method of measurement
ABG Test by GEM premier 3000

Secondary outcomes

1

Description
Arterial oxygen saturation
Timepoint
During ventilation of two lungs, 5, 10 and 20 minute after

one lung ventilation

Method of measurement

Monitoring

Intervention groups

1

Description

Intervention group: Propofol (100 µg/kg/min), During Surgery

Category

Prevention

2

Description

Control group: one Mac (1.1%) Isoflurane, During surgery

Category

Prevention

Recruitment centers

1

Recruitment center

Name of recruitment center

Ghaem Hospital

Full name of responsible person

Mohammad Reza Rahnamazadeh

Street address

Ghaem Hospital, Ahmadabad Street, Mashhad

City

Mashhad

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice Chancellor for Research of Mashhad University of Medical Sciences

Full name of responsible person

Mohammad Ramezani

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Vice Chancellor for Research of Mashhad University of Medical Sciences, Ghoreishi Building, Daneshgah Street, Mashhad

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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

Vice Chancellor for Research of Mashhad 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

Ghaem Hospital

Full name of responsible person

Mohammad Reza Rahnamazadeh

Position

Student

Other areas of specialty/work

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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