

Clinical Trial Protocol

Iranian Registry of Clinical Trials

09 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 ventilation in 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 ventilation (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 Rahnama Zadeh

Name of organization / entity

Ghaem Hospital

Country

Iran (Islamic Republic of)

Phone

+98 51 1768 7898

Email address

rahnamazadehm891@mums.ac.ir

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
Street address
Vice Chancellor for Research of Mashhad University of Medical Sciences, Ghoreishi Building, Daneshgah Street, Mashhad
City
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
Street address
Ghaem Hospital, Ahmadabaad street, Mashhad
City
Mashhad
Postal code
Phone
+98 51 1768 7898
Fax
Email
rahnamazadehm891@mums.ac.ir
Web page address

Person responsible for scientific inquiries

Contact
Name of organization / entity
Ghaem Hospital
Full name of responsible person
Alireza Sharifian Atar
Position
Anesthesiologist
Other areas of specialty/work
Street address
Ghaem Hospital, Ahmadabad Street, Mashhad
City
Mashhad
Postal code
Phone
+98 51 1840 0978
Fax
Email
sharifiana@mums.ac.ir
Web page address

Person responsible for updating data

Contact
Name of organization / entity
Ghaem Hospital
Full name of responsible person

Mohammad Reza Rahnamazadeh

Position

student

Other areas of specialty/work

Street address

Ghaem Hospital, Ahmadabad Street, Mashhad

City

Mashhad

Postal code

Phone

+98 51 1768 7898

Fax

Email

rahnamazadehm891@mums.ac.ir

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