Clinical Trial Protocol
Iranian Registry of Clinical Trials

02 Jul 2026

Comparison of cardiovascular response to the laryngoscopy and tracheal intubation after induction of anesthesia by propofol or etomidate

Protocol summary

Summary

Etomidate and Propofol are common anesthetic agents. Previous studies say that Etomidate can be used in patients with limited hemodynamic reserve and Propofol can lead to more hemodynamic instabilities. This study was done to explore the cardiovascular response during the induction of anesthesia with Etomidate or, for comparison, Propofol in elective orthopedic surgeries. Methods: this study was a double blind randomized clinical trial study including patients 18-45 years of age that were admitted for elective orthopedic surgeries in 2012 and 2013.. Studied population are patients who will hospitalized for having elective orthopedic surgeries on their upper and lower extremities . Sampling will be done the convenience way and after the first patient is randomly allocated to one of the two groups, the rest of the patients will be alternately and in order of their admission to the hospital allocated to either the group of Propofol induced anesthesia or Etomidate induced anesthesia. 50 patients who has the inclusion criteria wiill be randomly divided into two groups of 25 patients. The first group undergo general anesthesia by Propofol and the second group is anesthetized by Etomidate Hemodynamic and cardiovascular indicators such as: SBP , DBP , MAP , HR , O2sat of patients will be measured and recorded before the induction of anesthesia, before intubation, and 1, 3, 5, and 10 minutes afterward . Finally all the gathered information will be recorded in a computer and wiill be analyzed using SPSS version 20.The Chi-square, T-student and repeated measures ANOVA test were used for data analysis. Inclusion criteria: being aged from 18 to 45 years old; having no underlying diseases; being of ASA 1 classification; being an applicant for elective orthopedic surgery on upper and lower extremities; not being allergic to anesthetic drugs; not having any expected problems of the airway; receiving no narcotics or sedative drugs before the anesthesia and not being hemodynamic instability before the anesthesia. Patients who were a 4 grade after the induction of anesthesia and laryngoscopy, or their laryngoscopy were lasted longer than 30 seconds, or were not anesthetized using the mentioned dose of drugs and received higher doses, were excluded from the study.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201304166617N2**
Registration date: **2013-05-03, 1392/02/13**
Registration timing: **registered_while_recruiting**

Last update:
Update count: **0**

Registration date

2013-05-03, 1392/02/13

Registrant information

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Mehrdad Masoudifar
Name of organization / entity
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Recruitment status

Recruitment complete

Funding source

Isfahan University of Medical Sciences

Expected recruitment start date

2012-10-20, 1391/07/29

Expected recruitment end date

2013-07-21, 1392/04/30

Actual recruitment start date
empty
Actual recruitment end date
empty
Trial completion date
empty

Scientific title
Comparison of cardiovascular response to the laryngoscopy and tracheal intubation after induction of anesthesia by propofol or etomidate

Public title
Comparison of cardiovascular response to the laryngoscopy and tracheal intubation after induction of anesthesia by propofol or etomidate
Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria: being aged from 18 to 45 years old; having no underlying diseases; being of ASA 1 classification; being an applicant for elective orthopedic surgery on upper and lower extremities; not being allergic to anesthetic drugs; not having any expected problems of the airway; receiving no narcotics or sedative drugs before the anesthesia and not being hemodynamic unstablility before the anesthesia. Patients who were a 4 grade after the induction of anesthesia and laryngoscopy, or their laryngoscopy were lasted longer than 30 seconds, or were not anesthetized using the mentioned dose of drugs and received higher doses, were excluded from the study.
Age
From **18 years** old to **45 years** old
Gender
Both

Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: **50**
Randomization (investigator's opinion)
Randomized
Randomization description
Blinding (investigator's opinion)
Double blinded
Blinding description
Placebo
Not used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Isfahan University of Medical Sciences
Street address
Hezar Jarib st.
City
Isfahan
Postal code
Approval date
2011-11-09, 1390/08/18
Ethics committee reference number
22520

Health conditions studied

1

Description of health condition studied
General anesthesia
ICD-10 code
T88.5
ICD-10 code description
Other complications of anaesthesia

Primary outcomes

1

Description
Systolic blood pressure
Timepoint
Before intervention, at laryngoscopy time and 1 , 3 ,5 , 10 min after drug injection
Method of measurement
mm-hg, sphygmomanometer

2

Description
Diastolic bllod pressure
Timepoint
Before intervention, at laryngoscopy time and 1 , 3 ,5 , 10 min after drug injection
Method of measurement
mm-hg, sphygmomanometer

3

Description
Mean arterial pressure
Timepoint
Before intervention, at laryngoscopy time and 1 , 3 ,5 , 10 min after drug injection
Method of measurement
mm-hg, sphygmomanometer

4

Description
Heart rate
Timepoint

Before intervention, at laryngoscopy time and 1 , 3 ,5 , 10 min after drug injection

Method of measurement

ECG monitor

5

Description

O2 saturation

Timepoint

Before intervention, at laryngoscopy time and 1 , 3 ,5 , 10 min after drug injection

Method of measurement

Pulseoxymeter

Secondary outcomes

1

Description

Hypotension

Timepoint

Other complications of anaesthesia

Method of measurement

mm-Hg, sphygmomanometer

2

Description

Hypertension

Timepoint

Other complications of anaesthesia

Method of measurement

mm-Hg, sphygmomanometer

3

Description

Tachycardia

Timepoint

Other complications of anaesthesia

Method of measurement

ECG monitor

4

Description

Bradycardia

Timepoint

Before intervention, at laryngoscopy time and 1 , 3 ,5 , 10 min after drug injection

Method of measurement

ECG monitor

Intervention groups

1

Description

Propofol, 2.5 mg/kg within 30 seconds; IV.

Category

Treatment - Drugs

2

Description

Etomidate, 0.3 mg/kg within 30 seconds; IV.

Category

Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center

Ayatollah Kashani Hospital in Isfahan

Full name of responsible person

Street address

City

Isfahan

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Isfahan University of Medical Sciences

Full name of responsible person

Dr. Taleb Azarm

Street address

Isfahan University of Medical Sciences, Hezar jarib St.

City

Isfahan

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Isfahan 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

Isfahan University of Medical Sciences

Full name of responsible person

Mehrdad Masoudifar

Position

Assistant professor

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