Clinical Trial Protocol
Iranian Registry of Clinical Trials

16 Sep 2026

Comparison the Effect of Propofol, Etomidate and Thiopental on Seizure Duration following Electroconvulsive Therapy

Protocol summary

Summary

(1) Objective: Comparison the effect of Propofol, Etomidate and Thiopental on seizure duration following Electroconvulsive Therapy. (2) Design: Single blind clinical trial study. (3) Setting and conduct: Selecting 90 patients need to be treated by ECT in psychiatric unit of 5 Azar tertiary hospital affiliated to Golestan University of Medical Sciences and assigning them to three groups by simple random allocation method. (4) Participants including major eligibility criteria: Inclusion Criteria: Age between 15 to 50 years; Having psychiatric disorders based on DSM-IV diagnostic criteria and indication for ECT according to psychologist`s opinion. Exclusion Criteria: Having cardiovascular diseases and hypertension; Using medications affecting the duration of seizure; and Contraindication for ECT. (5) Interventions: Standard monitoring and pre-oxygenation with 100% FiO2 for 3 minutes for all patients in three groups; Anesthesia of the patients in the first, second, and third group with Thiopental (1.5 mg/kg), Etomidate (0.1 mg/kg), and Propofol (0.6 mg/kg), respectively; Administration of Succinyl Colin (0.5 mg/kg) as muscle relaxant and Atropine for prevention of bradycardia in all patients. (6) Main outcome measures (variable): Duration of seizure and recovery; changes in hemodynamic status such as heart rate and mean arterial pressure; and amount of charge for ECT.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2017071135021N1**
Registration date: **2017-08-13, 1396/05/22**
Registration timing: **prospective**

Last update:
Update count: **0**

Registration date

2017-08-13, 1396/05/22

Registrant information

Name
Ramin Amini
Name of organization / entity
Golestan university of Medical Sciences, Gorgan, Iran
Country
Iran (Islamic Republic of)
Phone
+98 17 3235 4936
Email address
r.amini@goums.ac.ir

Recruitment status

Recruitment complete

Funding source

Vice chancellor for research, Golestan University of Medical Sciences, Gorgan, Iran

Expected recruitment start date

2017-09-23, 1396/07/01

Expected recruitment end date

2017-11-22, 1396/09/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison the Effect of Propofol, Etomidate and Thiopental on Seizure Duration following Electroconvulsive Therapy

Public title

Comparison the Effect of Propofol, Etomidate and Thiopental on Seizure following Electroconvulsive Therapy

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion Criteria: Age between 15 to 50 years; Having psychiatric disorders based on DSM-IV diagnostic criteria and indication for ECT according to psychologist`s opinion. Exclusion Criteria: Having cardiovascular diseases and hypertension; Using medications affecting the duration of seizure; and Contraindication for ECT.

Age

From **15 years** old to **50 years** old

Gender

Both

Phase

3

Groups that have been masked

No information

Sample size

Target sample size: **90**

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Single 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 Golestan University of Medical Sciences

Street address

Shastkola road, Falsafi Educational Campus of Golestan University of Medical Sciences, Gorgan, Golestan province, Iran

City

Gorgan

Postal code

4934174515

Approval date

2017-02-12, 1395/11/24

Ethics committee reference number

IR.goums.REC1395.240

Health conditions studied

1

Description of health condition studied

Seizure

ICD-10 code

G40.6

ICD-10 code description

Grandmal seizures, unspecified (with or without petit mal

Primary outcomes

1

Description

Duration of Seizure

Timepoint

Following ECT, from beginning of seizure to end of it.

Method of measurement

by chronometer in second

Secondary outcomes

1

Description

Duration of Recovery

Timepoint

Recovery of consciousness after induction of anesthesia

Method of measurement

By chronometer in second

2

Description

changes of hemodynamic parameters including heart rate in beat per minute and mean arterial pressure in millimeter mercury according to systolic and diastolic blood pressure

Timepoint

During the study

Method of measurement

Recording of the non-invasive hemodynamic monitoring device

3

Description

Amount of charge for ECT

Timepoint

During setting up the ECT device

Method of measurement

Observation of the ECT Device Settings

Intervention groups

1

Description

Third intervention group: standard monitoring and pre-oxygenation with 100% FiO2 for 3 minutes; Anesthesia with intravenous Propofol (0.6 mg/kg); Administration of intravenous Succinyl Colin (0.5 mg/kg) as muscle relaxant and intravenous Atropine (0.1 mg/kg) for prevention of bradycardia

Category

Treatment - Drugs

2

Description
First intervention group: standard monitoring and pre-oxygenation with 100% FiO2 for 3 minutes; Anesthesia with intravenous Thiopental (1.5 mg/kg); Administration of intravenous Succinyl Colin (0.5 mg/kg) as muscle relaxant and intravenous Atropine (0.1 mg/kg) for prevention of bradycardia.
Category
Treatment - Drugs

3

Description
Second intervention group: standard monitoring and pre-oxygenation with 100% FiO2 for 3 minutes; Anesthesia with intravenous Etomidate (0.1 mg/kg); Administration of intravenous Succinyl Colin (0.5 mg/kg) as muscle relaxant and intravenous Atropine for prevention of bradycardia.
Category
Treatment - Drugs

Recruitment centers

1

Recruitment center
Name of recruitment center
5 Azar Tertiary Hospital
Full name of responsible person
Dr. Ramin Amini
Street address
5th Azar street, 5 Azar tertiary hospital, Gorgan, Golestan province, Iran.
City
Gorgan

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Vice Chancellor for Research, Golestan University of Medical Sciences
Full name of responsible person
Dr. Mohammad Hossein Taziki
Street address
Shastkola road, Falsafi Educational Campus of Golestan University of Medical Sciences, Gorgan, Golestan province, Iran
City
Gorgan
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, Golestan 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
Golestan University of Medical Sciences
Full name of responsible person
Dr. Ramin Amini
Position
Resident of Anesthesia
Other areas of specialty/work
Street address
5th Azar street, 5 Azar tertiary hospital, Gorgan, Golestan province, Iran.
City
Gorgan
Postal code
Phone
+98 17 3235 4936
Fax
Email
Dr.amini.ramin@gmail.com
Web page address

Person responsible for scientific inquiries

Contact
Name of organization / entity
Golestan University of Medical Sciences
Full name of responsible person
Dr. Kazem Kazem Nejad
Position
Anesthesiologist
Other areas of specialty/work
Street address
5th Azar street, 5 Azar tertiary hospital, Gorgan, Golestan province, Iran
City
Gorgan
Postal code
Phone
+98 17 3235 4936
Fax
Email
Dr.amini.ramin@gmail.com
Web page address

Person responsible for updating data

Contact

Name of organization / entity
Golestan University of Medical Sciences

Full name of responsible person
Dr. Ramin Amini

Position
Resident of Anesthesia

Other areas of specialty/work

Street address
5th Azar street, 5 Azar tertiary hospital, Gorgan, Golestan Province, Iran

City
Gorgan

Postal code

Phone
+98 17 3235 4936

Fax

Email
Dr.amini.ramin@gmail.com

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