

# Clinical Trial Protocol

## Iranian Registry of Clinical Trials

10 Jun 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% FiO<sub>2</sub> 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% FiO<sub>2</sub> 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% FiO<sub>2</sub> 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% FiO<sub>2</sub> 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.

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## Person responsible for scientific inquiries

### Contact

#### Name of organization / entity

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#### Full name of responsible person

Dr. Kazem Kazem Nejad

#### Position

Anesthesiologist

#### Other areas of specialty/work

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## Person responsible for updating data

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**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**

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Golestan Province, Iran

**City**

Gorgan

**Postal code****Phone**

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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*