Clinical Trial Protocol
Iranian Registry of Clinical Trials

07 Nov 2026

Comparison of etomidate and thiopental on seizure duration and amnesia in electroconvulsive therapy

Protocol summary

Summary

In this double blind randomized clinical trial, duration of seizure and amnesia after electroconvulsive therapy under etomidate anesthesia will be compared with routine thiopental anesthesia. Sixty consecutive male or female patients at the age of 18 to 40 years old who are candidate for ECT, assign in etomidate or thiopental group. Exclusion criteria are use of antiepileptic drugs and anesthesia complications. One days before ECT retrograde memory assessment test and anterograde memory will be performed. Before induction, 10 picture cards shown to the patient and asking them to remember them at the end of recovery. Induction of anesthesia is achieved with etomidate (0.3 mg/kg) and succinylcholine (0.5 mg/kg) in intervention group and thiopental (3mg/kg) and succinylcholine (0.5 mg/kg) in control group. Only anesthesiologist and nurse anesthesia are not blind and patient and investigators that are responsible for data collection will be masked. Measurable outcomes are duration of seizures (during anesthesia), and memory assessment at the end of recovery, 4 hours later, the next day and once a week for a month after ECT procedures.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2016040212123N4**
Registration date: **2017-03-28, 1396/01/08**
Registration timing: **registered_while_recruiting**

Last update:
Update count: **0**

Registration date

2017-03-28, 1396/01/08

Registrant information

Name

Javad Nourian

Name of organization / entity

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Recruitment status

Recruitment complete

Funding source

Deputy of Research, Shahroud University of Medical Sciences

Expected recruitment start date

2016-04-20, 1395/02/01

Expected recruitment end date

2018-03-20, 1396/12/29

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of etomidate and thiopental on seizure duration and amnesia in electroconvulsive therapy

Public title

Comparison of etomidate anesthesia and thiopental anesthesia on duration of seizure and amnesia after electroconvulsive therapy

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion: male or female patients at the age of 18 to 40 years old who are candidate for ECT Exclusion:patients

with ASAclass3 or higher, use of antiepileptic drugs and anesthesia complications

Age

From **18 years** old to **40 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **60**

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

Ethics committee, Deputy of Research, Shahroud University of Medical Sciences

Street address

Deputy of Research, Shahroud University of Medical Sciences

City

Shahroud

Postal code

3614773955

Approval date

2016-01-03, 1394/10/13

Ethics committee reference number

IR.SHMU.REC.1394.52

Health conditions studied

1

Description of health condition studied

psychiatric disorders

ICD-10 code

F20

ICD-10 code description

Schizophrenia, schizotypal and delusional disorders

2

Description of health condition studied

psychiatric disorders

ICD-10 code

F31

ICD-10 code description

Bipolar affective disorder

Primary outcomes

1

Description

duration of seizure

Timepoint

start of tonic contractions to end of clonic contractions

Method of measurement

second (use of chronometer)

2

Description

retrograde memory

Timepoint

One day before ECT,before induction of anesthesia, at the end of recovery, 4 hours later, the next day and once a week for a month after ECT procedures

Method of measurement

Asking 10 questions that patient can answer, like tel. number, patient's high school name or president name. These questions will repeat for detection of retrograde amnesia

3

Description

anterograde memory

Timepoint

One day before ECT, before induction of anesthesia, at the end of recovery, 4 hours later, the next day and once a week for a month after ECT procedures

Method of measurement

Showing 10 picture cards (car, house, airplane...) and then ask the patient to find them among 15 picture cards. If the patient recall all cards, he/she take 10 points.

Secondary outcomes

empty

Intervention groups

1

Description

In intervention group induction of anesthesia achieves with etomidate (0.3 mg/kg) and succinylcholine (0.5 mg/kg), ventilation with 100% oxygen and monitoring of pulse rate, blood pressure and SPo2 will be done.

Category

Treatment - Drugs

2

Description
In control group induction of anesthesia achieves with thiopental (3mg/kg) and succinylcholine (0.5 mg/kg), ventilation with 100% oxygen and monitoring of pulse rate, blood pressure and SPo2 will be done.
Category
Treatment - Drugs

Recruitment centers

1

Recruitment center
Name of recruitment center
Imam Hossein Hospital
Full name of responsible person
Javad Nourian MD
Street address
Imam Hossein Hospital, Ayatollah Towhidi Avenue
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Shahroud

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Deputy of Research, Shahroud University of Medical Sciences
Full name of responsible person
Mohammad Hasan Emamian
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Deputy of Research, Shahroud University of Medical Sciences, 7th of Tir square
City
Shahroud
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Deputy of Research, Shahroud 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
Imam Hossein Hospital, Shahroud University of Medical Sciences, Shahroud, Iran
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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