

Clinical Trial Protocol

Iranian Registry of Clinical Trials

16 Sep 2026

Comparison of effects of propofol and etomidate on rate pressure product and oxygen saturation in patients undergoing electroconvulsive therapy

Protocol summary

Summary

The aim of this study is to compare the effects of propofol and etomidate as induction agents for electroconvulsive therapy on rate pressure product and oxygen saturation. Having severe depression and resistance to medication are main inclusion criteria. Patients with cardiovascular disease, hypertension, and brain lesions are to be excluded from the study. In this double-blind study 60 patients who meet inclusion and exclusion criteria will be randomly assigned into two equal groups to receive either propofol or etomidate as induction agent for electroconvulsive therapy. Patients in the propofol group will be received 0.5-1 mg / Kg of propofol and succinylcholine 0.34-0.4 mg / Kg and patients in etomidate group will be received etomidate 0.3 mg / Kg and same dose of succinylcholine intravenously. Then electrical stimulation is given. Systolic and diastolic blood pressure, pulse rate and oxygen saturation of the patients in both groups before and 1 min after induction and at 1, 3 and 5 minutes after the electrical stimulation will be recorded. Finally, oxygen saturation and rate pressure product in two groups will be compared and evaluated.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2013081214138N2**

Registration date: **2013-09-28, 1392/07/06**

Registration timing: **prospective**

Last update:

Update count: **0**

Registration date

2013-09-28, 1392/07/06

Registrant information

Name

Mehrdad Mahdian

Name of organization / entity

Kashan University of Medical Sciences

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Recruitment status

Recruitment complete

Funding source

Kashan University of Medical Sciences

Expected recruitment start date

2013-10-07, 1392/07/15

Expected recruitment end date

2014-05-05, 1393/02/15

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of effects of propofol and etomidate on rate pressure product and oxygen saturation in patients undergoing electroconvulsive therapy

Public title

Comparison of effects of propofol and etomidate on cardiac and respiratory parameters during electroconvulsive therapy

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: All patients who are candidates of electroconvulsive therapy and have following criteria: severe depression, acute mania, catatonia, cases who

need immediate treatment and patients who do not respond to medications. Exclusion criteria: Ischemic heart disease, Hypertension, dysrhythmia, brain lesions.

Age

No age limit

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

Kashan University of Medical Sciences

Street address

Qutb-e ravandi Blvd

City

Kashan

Postal code

8719674591

Approval date

2012-08-08, 1391/05/18

Ethics committee reference number

29/5/1/1915/پ

Health conditions studied

1

Description of health condition studied

Severe depression

ICD-10 code

F32.2 and

ICD-10 code description

Severe depressive episode without psychotic symptoms and Severe depressive episode with psychotic symptoms

Primary outcomes

1

Description

Rate Pressure Product(systolic blood pressure multiplied pulse rate)

Timepoint

Before and 1 min after induction, 1, 3 and 5 min after ECT

Method of measurement

Blood pressure will be measured by sphygmomanometer in mmHg and pulse rate through pulseoximeter

2

Description

Blood oxygen saturation,(SPO2)

Timepoint

Before and 1 min after induction, 1, 3 and 5 min after ECT

Method of measurement

Through pulseoximeter as real numbers

Secondary outcomes

empty

Intervention groups

1

Description

Intervention: Patients will be received etomidate 0.3 mg / Kg and succinylcholine 0.34-0.4 mg / Kg for induction of anesthesia for ECT.

Category

Treatment - Drugs

2

Description

Control: Patients will be received 0.5-1 mg / Kg of propofol and succinylcholine 0.34-0.4 mg / Kg for anesthesia induction for ECT.

Category

Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center

Kashan University of Medical Sciences, Shahid Beheshti hospital

Full name of responsible person

Mehrdad Mhdian

Street address

Qutb-e Ravandi Blvd.

City

Kashan

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Kashan University of Medical Sciences, Deputy of Research

Full name of responsible person

Gholam Ali Hamidi

Street address

Qutb-e ravandi Blvd.

City

Kashan

Grant name**Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

Title of funding source

Kashan University of Medical Sciences, Deputy of Research

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**

Kashan University of Medical Sciences

Full name of responsible person

Mehrdad Mahdian

Position

Faculty member/ MSc (Anesthesia)

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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