Clinical Trial Protocol
Iranian Registry of Clinical Trials

08 Jun 2026

Comparison of effect of Succinylcholine and Cisatracurium in seizure time in electroconvulsive therapy in children with psychologic disease

Protocol summary

Summary

The goal of the article is comparison of seizure time in electro convulsive therapy (ECT) using Cisatracurium and Succinylcholine. It is a clinical trial study in phase 3, double blind randomized (Randomization with table of randomized number), without placebo control and mono-central. The study population consists of children with psychological diseases and total sample size is 60 which is divided into two groups of 30 people entitled A and B. Three drugs, Cisatracorium 50 µg/kg, Succinylcholine 0.5 mg/kg and Sodium thiopantal 2mg/kg are grouped into two packages of A and B. Package A consists of Cisatracorium and Sodium thiopantal and package B consists of Succinylcholine and Sodium thiopantal. The patients are divided into two groups receiving package A and B respectively. After taking informed consent from patients, an appropriate intravenous (IV) line will be taken and ECG and pulse oximeter and noninvasive blood pressure devices will be attached to the patients. ECT device will be attached bi-temporally and then time of seizure and tonic and clonic phases will be measured by chronometer. Moreover oxygen saturation and patient's vital signs will be measured before, during and after receiving the drugs. Main inclusion criterion is patients under 25 who are candidates to ECT and main exclusion criteria are patients with seizure time more than 90 seconds and less than 20 seconds and persistent medical problems.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2016081229310N1**
Registration date: **2016-09-21, 1395/06/31**
Registration timing: **registered_while_recruiting**

Last update:
Update count: **0**

Registration date

2016-09-21, 1395/06/31

Registrant information

Name
Behzad Nazemroaya
Name of organization / entity
Country
Iran (Islamic Republic of)
Phone
+98 31 3224 7233
Email address
b.nazemroaya@khuisf.ac.ir

Recruitment status

Recruitment complete

Funding source

Vice chancellor for research, Isfahan University of Medical Sciences

Expected recruitment start date

2016-08-31, 1395/06/10

Expected recruitment end date

2016-10-31, 1395/08/10

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of effect of Succinylcholine and Cisatracurium in seizure time in electroconvulsive therapy in children with psychologic disease

Public title

Comparison of effect of Succinylcholine and Cisatracurium on seizure time in electroconvulsive therapy

Purpose

Other

Inclusion/Exclusion criteria

Inclusion criteria: patients under 25 years who are candidates for electroconvulsive therapy (ECT). Exclusion criteria: persistent medical problems, seizure more than 90 seconds and less than 20 seconds, need to intubation, severe allergy, past history of seizure and epilepsy, addiction to alchohol and drugs.

Age

To **25 years** old

Gender

Both

Phase

3

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

Randomization will be done with table of randomized numbers.

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics committee of Isfahan University of Medical Sciences

Street address

Isfahan University of Medical Sciences, Hezar jarib street, Azadi square, Isfahan

City

Isfahan

Postal code

8174673461

Approval date

2016-06-20, 1395/03/31

Ethics committee reference number

IR.MUI.REC.1395.3.239

Health conditions studied

1

Description of health condition studied

Attention deficit-hyperactivity disorder(ADHD)

ICD-10 code

F90

ICD-10 code description

Disturbance of activity and attention

2

Description of health condition studied

anorexia nervosa

ICD-10 code

F50

ICD-10 code description

Anorexia nervosa

3

Description of health condition studied

mental retard

ICD-10 code

F70,F71,F7

ICD-10 code description

Mental retardation

4

Description of health condition studied

schizophrenia

ICD-10 code

F20

ICD-10 code description

schizophrenia

5

Description of health condition studied

depression

ICD-10 code

F32

ICD-10 code description

Depressive episode

6

Description of health condition studied

bipolar disorder

ICD-10 code

F30

ICD-10 code description

manic episode

7

Description of health condition studied

psychosis

ICD-10 code

F23

ICD-10 code description

acute and transient psychotic disorders

8

Description of health condition studied

conduct disorder

ICD-10 code
F91
ICD-10 code description
conduct disorder

9

Description of health condition studied
Obsessive-compulsive disorder(OCD)
ICD-10 code
F42
ICD-10 code description
obsessive compulsive disorder

10

Description of health condition studied
anxiety disorder
ICD-10 code
F41
ICD-10 code description
Other anxiety disorders

Primary outcomes

1

Description
duration of seizure
Timepoint
after intervention
Method of measurement
in seconds using a chronometer

2

Description
duration of tonic phase
Timepoint
after intervention
Method of measurement
in seconds using a chronometer

3

Description
duration of clonic phase
Timepoint
after intervention
Method of measurement
in seconds using a chronometer

4

Description
Blood Pressure
Timepoint
1, 5 and 10 seconds after the shock
Method of measurement
mmhg with Manometer

5

Description
Pulse
Timepoint
1, 5 and 10 seconds after the shock
Method of measurement
Beat per minute with Pulse Oximeter

6

Description
Beat per minute with Pulse Oximeter
Timepoint
O2 saturation
Method of measurement
Percent with Pulse Oximeter

7

Description
Recovery Duration
Timepoint
From the end of seizure to full consciousness
Method of measurement
Minute with Timer

8

Description
Back to Breathe Spontaneously
Timepoint
From the end of seizure to respiration
Method of measurement
Second with Timer

Secondary outcomes

1

Description
Cough
Timepoint
After recovery
Method of measurement
Ask the patient

2

Description
Nausea and Vomiting
Timepoint
After recovery
Method of measurement
Ask the patient

3

Description
Headache
Timepoint
After recovery
Method of measurement

Ask the patient

4

Description
Muscle Pain
Timepoint
After recovery
Method of measurement
Ask the patient

5

Description
Laryngospasm
Timepoint
After recovery
Method of measurement
Evaluation of patient such as breathing and o2 sat

Intervention groups

1

Description
Group B (the control group): After taking informed consent from patients, an appropriate intravenous (IV) line will be taken and ECG and pulse oximeter and noninvasive blood pressure devices will be attached to the patients. Pharmaceutical package B which consists of 0.5 mg/kg of Succinylcholine and 2mg/kg of Sodium thiopantal will be injected through IV line.Then ECT will be attached bi-temporally and shocks will be applied to the patient and then time of tonic and clonic phases and also time of seizure will be measured by chronometer.
Category
Treatment - Drugs

2

Description
Group A (intervention group): After taking informed consent from patients, an appropriate intravenous (IV) line will be taken and ECG and pulse oximeter and noninvasive blood pressure devices will be attached to the patients. Pharmaceutical package A which consists of 50µg/kg of Cisatracurium and 2mg/kg of Sodium thiopantal will be injected through IV line. Then ECT will be attached bi-temporally to the patient and shocks will be applied to the patient. Then time of tonic and colonic phases and also duration of seizure will be measured by chronometer
Category
Treatment - Drugs

Recruitment centers

1

Recruitment center
Name of recruitment center
Alzahara hospital's pediatric psychiatry ward 's electroconvulsive therapy center
Full name of responsible person
Behzad Nazemroaya ,Assistant Professor, Anesthesiology and Critical Care Research Center, Isfahan Un
Street address
8174675731, Alzahra hospital, Soffeh boulivard, Shahid Kesari highway, Isfahan
City
Isfahan

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Vice chancellor for research Isfahan University of Medical Sciences
Full name of responsible person
Dr mehdi nourbakhsh
Street address
Isfahan University of Medical Sciences, Hezar jarib street, Azadi square, Isfahan
City
Isfahan
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 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
Forough Mirzakhani Hafshejani
Position
Medical student/ Intern
Other areas of specialty/work
Street address
Isfahan University of Medical Sciences, Hezar jarib street, Azadi square, Isfahan
City

Isfahan

Postal code
814673461

Phone
+98 31 3668 0048

Fax

Email
frmirzakhani@gmail.com

Web page address

Person responsible for scientific inquiries

Contact

Name of organization / entity
Isfahan University Of Medical Sciences

Full name of responsible person
Behzad Nazemroaya

Position
Assistant Professor, Anesthesiology and Critical Care Research Center, Isfahan University of Medical

Other areas of specialty/work

Street address
International Bureau, Isfahan University of Medical Sciences, P.O. Box 319, Hezar-Jerib Ave

City
Isfahan

Postal code
8174673461

Phone
+98 36680048

Fax
+98 31 3668 7898

Email
b.nazemroaya@khuisf.ac.ir

Web page address
www.mui.ac.ir

Person responsible for updating data

Contact

Name of organization / entity
Isfahan university of medical sciences

Full name of responsible person
Forough Mirzakhani Hafshejani

Position
Medical student /Intern

Other areas of specialty/work

Street address
Isfahan University of Medical Sciences, Hezar jarib street, Azadi square, Isfahan

City
Isfahan

Postal code
814673461

Phone
+98 31 3668 0048

Fax
+98 31 3668 7898

Email
frmirzakhani@gmail.com

Web page address
www.mui.ac.ir

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