Clinical Trial Protocol
Iranian Registry of Clinical Trials

06 Nov 2026

Effect of Vitamin C on adrenal suppression following etomidate for rapid sequence induction in trauma patients

Protocol summary

Study aim
Effect of Vitamin C on adrenal suppression following etomidate for rapid sequence induction in trauma patients

Design
Phase 2, randomized, parallel clinical trial. Randomization will be done by using randomization program of WWW.randomization.com website. Sample size will be 30 samples in each group.

Settings and conduct
Traumatic patients who need airway management by reapid sequence induction / intubation and admit in Imam Reza hospital, Tabriz, will randomly divide in 2 groups. Prior to intubation blood serum cortisol level will be checked in two groups. Patients in control group will receive 1.5 Mg/Kg lidocain, 2 micg/Kg fentanyl, 0.2 Mg/Kg etomidate and 1.5 Mg/Kg succinylcholin. Intervention group will receive same drugs in same manner but 1 gram of intravenous vitamin C will be injected prior to etomidate injection. Serum cortisol level will be checked 3 hours after intubation in both groups.

Participants/Inclusion and exclusion criteria
Traumatic patients older than 18 year old who need airway management by using rapid sequence induction/ intubation will included in study. Corticosteroid users, pregnant patients and patients with a history of endocrine, renal or hepatic disorders will be excluded.

Intervention groups
In control group patients will be intubated by using lidocain, fentanyl, etomidate and succinylcholin. In intervention group same drugs will used for induction of sedation but patients will receive 1 gram of intravenous Vitamin C prior to etomidate injection.

Main outcome variables
Serum cortisol level three hours after intubation

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20090923002496N11**
Registration date: **2019-04-19, 1398/01/30**
Registration timing: **prospective**

Last update: **2019-04-19, 1398/01/30**
Update count: **0**

Registration date
2019-04-19, 1398/01/30

Registrant information

Name
Hassan Soleimanpour

Name of organization / entity
Tabriz University of Medical Sciences

Country
Iran (Islamic Republic of)

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Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2019-05-22, 1398/03/01

Expected recruitment end date
2019-11-22, 1398/09/01

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
Effect of Vitamin C on adrenal suppression following etomidate for rapid sequence induction in trauma

patients

Public title
Effect of Vitamin C on adrenal suppression following etomidate for rapid sequence induction in trauma patients
Purpose
Prevention
Inclusion/Exclusion criteria
Inclusion criteria:
Traumatic patients who need rapid sequence induction/ intubation More than 18 year old
Exclusion criteria:
Corticosteroids users Pregnant patients history of endocrine disorders history of hepatic disorders history of renal disorders
Age
From **18 years** old
Gender
Both

Phase
2
Groups that have been masked
No information
Sample size
Target sample size: **30**
Randomization (investigator's opinion)
Randomized
Randomization description
A simple method randomization with a unit of individuals will be used. randomization will be done by using randomization program of WWW.randomization.com website.
Blinding (investigator's opinion)
Not blinded
Blinding description
Placebo
Used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
ethic committee of Research Vice chancellor of Tabriz University of Medical Sciences
Street address
Research Vice chancellor of Tabriz University of Medical Sciences ,Tabriz University of Medical Sciences, Daneshgah Street, Tabriz-51664, I.R IRAN
City
Tabriz
Province
East Azarbaijan
Postal code
5166614776
Approval date
2019-02-04, 1397/11/15
Ethics committee reference number
IR.TBZMED.REC.1397.925

Health conditions studied

1

Description of health condition studied
Rapid sequence induction/ intubation
ICD-10 code
ICD-10 code description

2

Description of health condition studied
Adrenal suppression
ICD-10 code
E27.3
ICD-10 code description
Drug-induced adrenocortical insufficiency

Primary outcomes

1

Description
Blood cortisol level
Timepoint
Prior to and three hours after to etomidate injection
Method of measurement
Blood serum cortisol level measurement as nano-moles / liter

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group: A single dose of one gram of intravenous Vitamin C will be used. The drug we will use in this study is made by Sobhan pharmaceutical Co. Iran.
Category
Treatment - Drugs

2

Description
Control group: Will receive 5CC of normal saline ass placebo.
Category
Placebo

Recruitment centers

1

Recruitment center

Name of recruitment center
Imam Reza hospital

Full name of responsible person
Hassan Soleimanpour

Street address
Emergency Medicine Department, Tabriz University of Medical Sciences, Daneshgah Street, Tabriz-51664, I.R IRAN

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Tabriz University of Medical Sciences

Full name of responsible person
Dr Abolghasem Jouyban

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Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?
Yes

Title of funding source
Tabriz University of Medical Sciences

Proportion provided by this source
100

Public or private sector
Public

Domestic or foreign origin
Domestic

Category of foreign source of funding
empty

Country of origin

Type of organization providing the funding
Academic

Person responsible for general inquiries

Contact

Name of organization / entity
Tabriz University of Medical Sciences

Full name of responsible person
Hassan Soleimanpour

Position
Professor

Latest degree
Specialist

Other areas of specialty/work
Anesthesiology

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Person responsible for updating data

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Sharing plan

Deidentified Individual Participant Data Set (IPD)
Yes - There is a plan to make this available

Study Protocol
Yes - There is a plan to make this available

Statistical Analysis Plan
Yes - There is a plan to make this available

Informed Consent Form
Yes - There is a plan to make this available

Clinical Study Report
Yes - There is a plan to make this available

Analytic Code
Yes - There is a plan to make this available

Data Dictionary
Yes - There is a plan to make this available

Title and more details about the data/document
All collected de identified IPD

When the data will become available and for how long
Data will be available in september 2020.

To whom data/document is available
Data will be available for all interested researchers

Under which criteria data/document could be used
Data will be available for use in other studies. researchers can ask for data of this study by sending email to dr. Hassan Soleimanpour

From where data/document is obtainable
Dr. Hassan Soleinampour soleimanpourh@tbzmed.ac.ir

What processes are involved for a request to access data/document
In two weeks after sending data request email, they can receive data

Comments