Clinical Trial Protocol
Iranian Registry of Clinical Trials

13 Jun 2026

The Effect of Low-Dose Ketamine in Treating Acute Asthma Attack

Protocol summary

Summary

The present study is a single blind, randomized clinical trial with placebo control that evaluates the effect of low-dose ketamine in treating asthmatic patients presented to the emergency department. Patients with mild to moderate asthma, aged between 18 to 85 years old,and without any prohibition for using IV ketamine were entered. If the patient's clinical condition worsened during the study, or needed ventilator support for respiration or showed ketamine side effects, would be excluded. Patient's divided in 2 group and each group contained 46 patient. Both groups received basic treatments of asthma attack with standard doses including inhaled beta agonists and anticholinergics, and IV corticosteroids. The intervention group received IV ketamine with 0.3, 0.4, or 0.5 mg/kg doses in addition to the standard treatment. Peak expiratory flow rate (PEFR) was measured and recorded before and 30 minutes after treatment for all patients. At the study beginning, the peak expiratory flow for each patient was measured and then compared to their expected natural flow based on their sex, age, and height, and if it was lower than 70% of the normal rate, the case was considered as acute asthma attack. After 30 minutes we will check the peak expiratory flow again and if PEFR will greater than 70% the treatment approach achieved.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2015102912072N9**
Registration date: **2015-11-14, 1394/08/23**
Registration timing: **retrospective**

Last update:
Update count: **0**

Registration date

2015-11-14, 1394/08/23

Registrant information

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Mehrdad Esmailian
Name of organization / entity
Isfahan University of Medical Sciences
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Iran (Islamic Republic of)
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Recruitment status

Recruitment complete

Funding source

Isfahan University of Medical Sciences

Expected recruitment start date

2014-03-20, 1392/12/29

Expected recruitment end date

2015-03-20, 1393/12/29

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

The Effect of Low-Dose Ketamine in Treating Acute Asthma Attack

Public title

The Ketamine Effect in Acute Asthma

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion Criteria: patient's with mild to moderate asthma; patient's without any prohibition for using ketamine and history of allergic reaction. Exclusion Criteria: patient's clinical condition worsened during the study; patient's needed mechanical ventilation; patient's who show ketamine side effects.

Age
From **18 years** old to **85 years** old
Gender
Both

Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: **92**
Randomization (investigator's opinion)
Randomized
Randomization description
Blinding (investigator's opinion)
Single blinded
Blinding description
Placebo
Used
Assignment
Parallel
Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Isfahan University of Medical Sciences
Street address
Azadi Ave.
City
Isfahan
Postal code
Approval date
2013-09-23, 1392/07/01
Ethics committee reference number
598746

Health conditions studied

1

Description of health condition studied
Asthma
ICD-10 code
J46
ICD-10 code description
Status asthmaticus

Primary outcomes

1

Description
Peak Expiratory Flow Rate
Timepoint
at the study begining and every 30 minutes till 1 houre
Method of measurement
peak Flow Meter

Secondary outcomes

1

Description
Clinical signs
Timepoint
at the study begining and every 30 minutes till 1 houre
Method of measurement
Clinical Examination

2

Description
Ketamine Complications
Timepoint
at the study begining and every 30 minutes till 1 houre
Method of measurement
Clinical Examination

Intervention groups

1

Description
The intervention group will receive IV infusion Ketamine in 30 minutes (made by ROTEXMEDICA Company, Germany) with 0.3, 0.4, or 0.5 mg/kg doses in addition to the standard treatment
Category
Treatment - Drugs

2

Description
The control group will receive IV infusion Placebo in 30 minutes with the standard treatment
Category
Treatment - Drugs

Recruitment centers

1

Recruitment center
Name of recruitment center
Alzahra General Hospital
Full name of responsible person
Mehrdad Esmailian
Street address
Sofeh Blv.
City
Isfahan

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Isfahan University of Medical Sciences
Full name of responsible person
Reza Azizkhani
Street address
Azadi Ave.
City
Isfahan
Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
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
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Person responsible for updating data

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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