

Clinical Trial Protocol

Iranian Registry of Clinical Trials

11 Sep 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

Name

Mehrdad Esmailian

Name of organization / entity

Isfahan University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 31 3629 3482

Email address

m_esmailian@med.mui.ac.ir

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 beginning and every 30 minutes till 1 hour
Method of measurement
peak Flow Meter

Secondary outcomes

1

Description
Clinical signs

Timepoint
at the study beginning and every 30 minutes till 1 hour

Method of measurement
Clinical Examination

2

Description
Ketamine Complications

Timepoint
at the study beginning and every 30 minutes till 1 hour

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
Mehrddad 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

Full name of responsible person

Mehrdad Esmailian

Position

Assistant Professor of Emergency Medicine

Other areas of specialty/work

Street address

Sofeh Blv.

City

Isfahan

Postal code

Phone

+98 31 3669 0021

Fax

Email

m_esmailian@med.mui.ac.ir

Web page address

Person responsible for scientific inquiries

Contact

Name of organization / entity

Isfahan University of Medical Sciences

Full name of responsible person

Mehrdad Esmailian

Position

Assistant Professor of Emergency Medicine

Other areas of specialty/work

Street address

Sofeh Blv.

City

Isfahan

Postal code

Phone

+98 31 3669 0021

Fax

Email

m_esmailian@med.mui.ac.ir

Web page address

Person responsible for updating data

Contact

Name of organization / entity

Isfahan University of Medical Sciences

Full name of responsible person

Mehrdad Esmailian

Position

Assistant Professor of Emergency Medicine

Other areas of specialty/work

Street address

Sofeh Blv.

City

Isfshsn

Postal code

Phone

+98 31 3669 0021

Fax

Email

m_esmailian@med.mui.ac.ir

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