

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 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

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

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

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