Clinical Trial Protocol
Iranian Registry of Clinical Trials

16 Jul 2026

A Comparison between Intravenous Furosemide and Nebulized Furosemide in Controlling the Symptoms of the Patients with Pulmonary Edema

Protocol summary

Summary

Pulmonary edema is one of the most common acute respiratory disorders that diagnosis and treatment of the disease still remain as a health problem. So, the aim of this study is to compare the efficacy of intravenous Furosemide and nebulized Furosemide in control of the symptoms of the patients with pulmonary edem. in this clinical trial, 85 patients with pulmonary edema wil enroll . Patients will randomly divide into two groups. In the intervention group the patients will receive nebulized Furosemide at a dose of 1 mg for 20 minutes diluted in 2 ml of sodium chloride 0.9% and in the control group the patients will receive intravenous Furosemide at a dose of 1mg / kg. Then, hemodynamic parameters and estimation of the clinical severity of the pulmonary edema in both groups will assess for two hours.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT2017030332853N1**
Registration date: **2017-03-29, 1396/01/09**
Registration timing: **prospective**

Last update:
Update count: **0**

Registration date

2017-03-29, 1396/01/09

Registrant information

Name

Somaye Shaabani

Name of organization / entity

Ahvaz Jundishapur University of Medical Sciences

Country

Iran (Islamic Republic of)

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+98 61 3373 8317

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Recruitment status

Recruitment complete

Funding source

Ahvaz Jundishapour University of Medical Sciences

Expected recruitment start date

2017-05-01, 1396/02/11

Expected recruitment end date

2017-11-01, 1396/08/10

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

A Comparison between Intravenous Furosemide and Nebulized Furosemide in Controlling the Symptoms of the Patients with Pulmonary Edema

Public title

Comparison between two different routes of Furosemide administration in Patients with Pulmonary Edema

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: Patients with shortness of breath during the past six hours, patients with clinical signs of pulmonary edema (tachypnea, increased lung function, use of accessory muscles, crackles, wheezes and gallop rhythm), and radiographically diagnosis of pulmonary edema. Exclusion criteria: Cardiogenic shock and blood pressure less than 90 mmHg, noncardiogenic pulmonary edema, myocardial infarction, severe heart valve

disease, history of pulmonary obstructive disease, patients requiring intubation, cardiac arrhythmias, liver failure, cancer, sensitivity to Furosemide , patient's dissatisfaction and pregnancy.

Age
From **18 years** old to **55 years** old

Gender
Both

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **85**

Randomization (investigator's opinion)
Randomized

Randomization description

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
The ethics committee of Ahvaz Jundishapur University of Medical Sciences

Street address
Golestan Blv

City
Ahvaz

Postal code

Approval date
2016-01-01, 1394/10/11

Ethics committee reference number
IR.AJUMS.REC.1394.448

Health conditions studied

1

Description of health condition studied
Pulmonary edema

ICD-10 code
J81.0

ICD-10 code description
Acute pulmonary edema

Primary outcomes

1

Description
Dyspnea severity

Timepoint
15,30,60 and 120 minutes after treatment

Method of measurement
Dyspnea Scale criteria

Secondary outcomes

empty

Intervention groups

1

Description
In the intervention group the patients will receive nebulized furosemide at a dose of 1 mg furosemide for 20 minutes in 2 ml of sodium chloride 0.9%

Category
Treatment - Drugs

2

Description
The control group the patients will receive intravenous furosemide at a dose of 1mg / kg

Category
Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center
Golestan Hospital

Full name of responsible person
Somaye Shaabani

Street address

City
Ahvaz

Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Ahvaz Jundishapur University of Medical Sciences

Full name of responsible person
Somaye Shaabani

Street address
Farvardin Blv

City
Ahvaz

Grant name

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Ahvaz Jundishapur 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
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Person responsible for updating data

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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