

Clinical Trial Protocol

Iranian Registry of Clinical Trials

11 Sep 2026

Effect of Zinc Sulfate on clinical symptoms of acute bronchiolitis in children less than 2 years old

Protocol summary

Summary

Introduction: Acute bronchiolitis may lead to hospitalization with some morbidity and mortality. Finding some agents to reduce severity of disease can improve morbidity and mortality. **Objectives & (hypothesis OR questions):** To evaluate the effect of zinc sulfate in improving the clinical manifestations of acute bronchiolitis in children younger than 2 years old. **Materials & Methods:** It was a double blind pilot trial on patients, age 2 months to 23 months at Ghaem and Dr. Sheikh hospitals in Mashhad from Jan 2008 to March 2009. Patients randomly divided into two groups: case group who took oral zinc sulfate 1% (1 CC per kg in infants below 1 year old and 10 CC (20 mg of elemental zinc) for children above 1 year old during hospitalization and controls who received placebo. Bottles of drugs were similar in shape and size. **Inclusion criteria:** Age 2 months to 23 months, first attack of wheezing. **Exclusion criteria:** Any history of previous wheezing attack(s), congenital heart disease, severe malnutrition, any history of taking zinc sulfate last month and pneumonia. **Clinical manifestation** including tachypnea, wheezing, cyanosis, intercostal and subcostal retractions and nasal flaring at admission, 24, 48, and 72 hours after hospitalization were assessed. Recovery from acute bronchiolitis was defined as; complete disappearance of tachypnea, intercostal and subcostal retractions, wheezing and cyanosis

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201011065114N1**

Registration date: **2010-12-23, 1389/10/02**

Registration timing: **retrospective**

Last update:

Update count: **0**

Registration date

2010-12-23, 1389/10/02

Registrant information

Name

Farhad Heydarian

Name of organization / entity

Mashhad university of medical sciences

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Iran (Islamic Republic of)

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Recruitment status

Recruitment complete

Funding source

Vice Chancellor for research of Mashhad university of medical sciences

Expected recruitment start date

2008-01-10, 1386/10/20

Expected recruitment end date

2009-03-16, 1387/12/26

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of Zinc Sulfate on clinical symptoms of acute bronchiolitis in children less than 2 years old

Public title

The role of zinc sulfate in acute bronchiolitis in patients aged 2 months to 23 months old

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria: Age 2 months to 23 months, first attack of wheezing. Exclusion criteria: Any history of previous wheezing attack(s), congenital heart disease, severe malnutrition, any history of taking zinc sulfate last month and pneumonia

Age

From **1 year** old to **2 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **50**

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Double blinded

Blinding description

Placebo

Used

Assignment

Other

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Mashhad university of medical sciences

Street address

Daneshgah Street

City

Mashhad

Postal code

Approval date

2007-06-16, 1386/03/26

Ethics committee reference number

86229

Health conditions studied

1

Description of health condition studied

Acute bronchiolitis

ICD-10 code

J21

ICD-10 code description

Acute bronchiolitis

Primary outcomes

1

Description

Clinical manifestations

Timepoint

every day

Method of measurement

Physical exam

2

Description

Recovery

Timepoint

Daily

Method of measurement

Inspection

Secondary outcomes

empty

Intervention groups

1

Description

Syrup of zinc sulfate 1% (1CC per kg) for children below 1 year old and 20 mg elemental zinc for older than 1 year old in case group were administered during hospitalization

Category

Treatment - Drugs

2

Description

The control group was taken placebo. The bottles were similar in size and shape for both case and control groups.

Category

Treatment - Drugs

Recruitment centers

1

Recruitment center

Name of recruitment center

Ghaem hospital

Full name of responsible person

Dr. Farhad Heydarian

Street address

Ghaem hospital, Ahmad abad St.

City

Mashhad

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Mashhad University of Medical Sciences

Full name of responsible person

Dr. Mohammad Ramezani

Street address

Daneshgah St. Ghorashi building

City

Mashhad

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Mashhad 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

Mashhad University of Medical Sciences

Full name of responsible person

Dr. Farhad Heydarian

Position

Pediatrician-Associated professor of pediatrics

Other areas of specialty/work

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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