

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

A clinical trial to compare the effects of ranitidine, pantoprazole, and sucralfate on the prevention of gastrointestinal bleeding and ventilator-associated pneumonia in children under mechanical ventilation.

Protocol summary

Study aim

To compare the effects of ranitidine, pantoprazole, and sucralfate on the prevention of gastrointestinal bleeding and ventilator-associated pneumonia in children under mechanical ventilation.

Design

In this double-blinded clinical trial with a control group, 87 children under mechanical ventilation for more than 48 hours will be selected as parallel groups using a table of random numbers.

Settings and conduct

The children under mechanical ventilation for more than 48 hours at the pediatric intensive care unit in Doctor Sheikh and Akbar Children's hospitals are selected in this study. In this double-blind study, the clinical care and those who are responsible for data collection are blind to the patients groups and the type of drugs.

Participants/Inclusion and exclusion criteria

Inclusion criteria: The patients admitted to the pediatric care unit who have been under ventilation for at least 48 hours. Exclusion criteria: Hospital stay or mechanical ventilation less than 48 hours, gastrointestinal bleeding before the onset of the treatment, ventilator-associated pneumonia before the onset of the treatment.

Intervention groups

The first intervention group will receive 4 mg/kg/day of intravenous ranitidine 3 times per day. The second group will receive 1 mg/kg/day of intravenous pantoprazole 2 times per day. Moreover, the third group will receive 60 mg/kg/day of oral sucralfate 4 times per day.

Main outcome variables

The three intervention groups will be evaluated and compared regarding the rate of ventilator-associated pneumonia, gastrointestinal bleeding, upper airway colonization, hospital stay in the intensive care unit, and mortality.

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20190522043672N1**

Registration date: **2020-01-18, 1398/10/28**

Registration timing: **prospective**

Last update: **2020-01-18, 1398/10/28**

Update count: **0**

Registration date

2020-01-18, 1398/10/28

Registrant information

Name

Majid Sezavar

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 51 3870 9225

Email address

sezavardm@mums.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2020-02-20, 1398/12/01

Expected recruitment end date

2021-02-19, 1399/12/01

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

A clinical trial to compare the effects of ranitidine, pantoprazole, and sucralfate on the prevention of gastrointestinal bleeding and ventilator-associated pneumonia in children under mechanical ventilation.

Public title

Prevention of gastrointestinal bleeding and ventilator-associated pneumonia in children under mechanical ventilation.

Purpose

Prevention

Inclusion/Exclusion criteria

Inclusion criteria:

The patients admitted to the pediatric care unit who have been under ventilation for at least 48 hours.

Exclusion criteria:

Hospital stay or mechanical ventilation less than 48 hours Gastrointestinal bleeding before the onset of the treatment, Ventilator-associated pneumonia before the onset of the treatment

Age

From **1 month** old to **18 years** old

Gender

Both

Phase

2

Groups that have been masked

- Care provider
- Outcome assessor

Sample size

Target sample size: **87**

Randomization (investigator's opinion)

Randomized

Randomization description

The subjects will be randomly assigned into three groups of 29 patients with blocks of 2, 4 and 6 using randomization method. A noninvolved researcher will determine the random assignment sequencing in sample selection based on a statistical analysis system (SAS), computer software. Sequentially numbered sealed opaque envelopes will be used to conceal the sequencing. Accordingly, the participants were given codes and assigned into the intervention and control groups.

Blinding (investigator's opinion)

Double blinded

Blinding description

The children under mechanical ventilation for more than 48 hours at the pediatric intensive care unit in Doctor Sheikh and Akbar Children's hospitals are selected in this study. In this double-blind study, sequentially numbered sealed opaque envelopes will be used to conceal the sequencing. The clinical care and those who are responsible for data collection are blind to the patients groups and the type of drugs.

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics Committee of Mashhad University of Medical Sciences

Street address

Vice Chancellor for Research, Mashhad University of Medical Sciences, Ghoreishi building, Daneshgah Street

City

Mashhad

Province

Razavi Khorasan

Postal code

9195965919

Approval date

2019-05-28, 1398/03/07

Ethics committee reference number

IR.MUMS.MEDICAL.REC.1398.691

Health conditions studied

1

Description of health condition studied

Gastrointestinal bleeding

ICD-10 code

T47.8

ICD-10 code description

Other agents primarily affecting the gastrointestinal system

2

Description of health condition studied

Ventilator-associated pneumonia

ICD-10 code

J84.9

ICD-10 code description

Interstitial pulmonary disease, unspecified

Primary outcomes

1

Description

The rate of ventilator-associated pneumonia

Timepoint

48 hours after intervention

Method of measurement

chest radiography

2

Description

The rate of gastrointestinal bleeding

Timepoint

48 hours after intervention

Method of measurement

Blood in stool and vomit

Secondary outcomes

1

Description

Upper airway colonization

Timepoint

48 hours after intervention

Method of measurement

Microbiological culture

2

Description

Hospital stay in the intensive care unit

Timepoint

After intervention

Method of measurement

Questionnaire

3

Description

The rate of mortality

Timepoint

After intervention

Method of measurement

Questionnaire

Intervention groups

1

Description

Intervention group 1: Who will receive 4 mg/kg/day of intravenous ranitidine 3 times per day.

Category

Prevention

2

Description

Intervention group 2: Who will receive 1 mg/kg/day of intravenous pantoprazole 2 times per day.

Category

Prevention

3

Description

Intervention group 3: Who will receive 60 mg/kg/day of oral sucralfate 4 times per day.

Category

Prevention

Recruitment centers

1

Recruitment center

Name of recruitment center

Akbar Children's Hospital

Full name of responsible person

Majid Sezavar

Street address

Akbar Children's Hospital, Shahid Kaveh 14, Shahid Kaveh Boulevard

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9173595100

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iomresearch@mums.ac.ir

2

Recruitment center

Name of recruitment center

Doctor Sheikh Hospital

Full name of responsible person

Majid Sezavar

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Mashhad

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Sheikh.Hos@mums.ac.ir

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Mashhad University of Medical Sciences

Full name of responsible person

Mohsen Tafaghodi

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Vice Chancellor for Research, Mashhad University of Medical Sciences, Ghoreishi building, Daneshgah Street

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vcresearch@mums.ac.ir

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

Public

Domestic or foreign origin

Domestic

Category of foreign source of funding

empty

Country of origin**Type of organization providing the funding**

Academic

Person responsible for general inquiries**Contact****Name of organization / entity**

Mashhad University of Medical Sciences

Full name of responsible person

Majid Sezavar

Position

Assistant Professor

Latest degree

Subspecialist

Other areas of specialty/work

Pediatrics

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Person responsible for scientific inquiries**Contact****Name of organization / entity**

Mashhad University of Medical Sciences

Full name of responsible person

Majid Sezavar

Position

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Latest degree

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Person responsible for updating data**Contact****Name of organization / entity**

Mashhad University of Medical Sciences

Full name of responsible person

Majid Sezavar

Position

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Latest degree

Subspecialist

Other areas of specialty/work

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Sharing plan**Deidentified Individual Participant Data Set (IPD)**

Yes - There is a plan to make this available

Study Protocol

Yes - There is a plan to make this available

Statistical Analysis Plan

Undecided - It is not yet known if there will be a plan to make this available

Informed Consent Form

Yes - There is a plan to make this available

Clinical Study Report

Yes - There is a plan to make this available

Analytic Code

Not applicable

Data Dictionary

Undecided - It is not yet known if there will be a plan to make this available

Title and more details about the data/document

The total data to be included are the primary and secondary effects to be shared.

When the data will become available and for how long

6 months after printing results

To whom data/document is available

Our data will only be available to researchers working in science center and university.

Under which criteria data/document could be used

Our data will be available for scholars working in science

center and university.

From where data/document is obtainable

Majid Sezavar provides the analysis code to the applicants via email: sezavardm@mums.ac.ir

What processes are involved for a request to access data/document

Applicants can respond to the email of the respondent and receive a response within a week

Comments