

Clinical Trial Protocol

Iranian Registry of Clinical Trials

24 Jul 2026

Comparison of the effect of respiratory physiotherapy and peep changes on the results of capnography in patients with ventilator associated pneumonia.

Protocol summary

Study aim

The purpose of our application is to use respiratory physiotherapy instead of PEEP, to reduce the complications of using PEEP. General purpose: Determining the Comparative Effect of Respiratory Physiotherapy and PEEP Changes in Patients with VAP, Based on Expiratory CO2 Exits. Determine and compare the amount of expiratory CO2 removal after respiratory physiotherapy, and the effect of PEEP changes in patients with VAP.

Design

Clinical practice has two groups of study, With parallel groups. Without blinding, Sampling is easy and accessible with random allocation.

Settings and conduct

Place of study: ICU of Hasheminejad Hospital in Mashhad. How to do the study: In a group that has PEEP five. We put PEEP ten for thirty minutes. And then we record the results of the capnography. In another group that has PEEP five, We perform three types of respiratory physiotherapy for 15 minutes.

Participants/Inclusion and exclusion criteria

Entry requirements: Patients aged 18 to 80 years. The patient has a tracheal tube and is connected to a ventilator. Patient with pneumonia associated ventilator, with positive chip culture. The patient is under the ventilator and has the parameter PEEP. Conditions of failure to enter: A patient with systolic blood pressure of less than 90 mmHg. Patient with rib fractures and chest tube. Patient with high ICP Symptoms. Patient with fracture of cervical and lumbar spine and preservation of immobility. Patient with abdominal and chest surgeries.

Intervention groups

Samples are divided into two groups. We increase PEEP in one group, and in the other group, we perform respiratory physiotherapy. Compare the results the capnography.

Main outcome variables

Respiratory physiotherapy, PCO2 value, PEEP changes, PCO2 waveforms, PCO2 release rate, History of pulmonary disease, history of smoking, level of consciousness, patient's drug use, history of physiotherapy,

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20181105041567N1**

Registration date: **2018-12-10, 1397/09/19**

Registration timing: **registered_while_recruiting**

Last update: **2018-12-10, 1397/09/19**

Update count: **0**

Registration date

2018-12-10, 1397/09/19

Registrant information

Name

Morteza Shahrokhi

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

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Email address

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Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2018-11-22, 1397/09/01

Expected recruitment end date

2019-03-19, 1397/12/28

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
Comparison of the effect of respiratory physiotherapy and peep changes on the results of capnography in patients with ventilator associated pneumonia.

Public title
The effect of respiratory physiotherapy and PEEP changes on the results of capnography.

Purpose
Treatment

Inclusion/Exclusion criteria
Inclusion criteria:
 Patients aged 18 to 80 years The patient has a tracheal tube and is connected to a ventilator Patient with pneumonia associated ventilator with positive chip culture The patient is under the ventilator and has the parameter PEEP
Exclusion criteria:
 A patient with systolic blood pressure of less than 90 mmHg Patient with rib fractures and chest tube Patient with high ICP Symptoms Patient with fracture of cervical and lumbar spine and preservation of immobility Patient with abdominal and chest surgeries

Age
From **18 years** old to **80 years** old

Gender
Both

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **80**

Randomization (investigator's opinion)
Randomized

Randomization description
Sampling method was available in this study and allocation of samples in two groups was randomized

Blinding (investigator's opinion)
Not blinded

Blinding description

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids
empty

Ethics committees

1

Ethics committee
Name of ethics committee
 Ethics Committee of Sabzevar University of Medical Sciences
Street address
 Campus, University of Medical Sciences, Nuclear Martyrs Boulevard
City
 Sabzevar
Province
 Razavi Khorasan
Postal code
 9617913112
Approval date
 2018-10-31, 1397/08/09
Ethics committee reference number
 IR.MEDSAB.REC.1397.050

Health conditions studied

1

Description of health condition studied
ventilator associated pneumonia.

ICD-10 code
J15.9

ICD-10 code description
Unspecified bacterial pneumonia

Primary outcomes

1

Description
Numerical value of capnography.

Timepoint
Beginning of study, In the minutes of one, five, ten, fifteen, thirty measurements.

Method of measurement
Capnograph machine

Secondary outcomes

1

Description
The shape of the capnographic waves.

Timepoint
Beginning of study, At minutes one, five, ten, fifteen and thirty are measured.

Method of measurement
Capnograph machine

Intervention groups

1

Description
Intervention group: The group in which we increase PEEP. We put PEEP ten for thirty minutes.

Category

Treatment - Devices

2**Description**

Intervention group: A group that is undergoing respiratory physiotherapy for fifteen minutes.

Category

Treatment - Devices

Recruitment centers**1****Recruitment center****Name of recruitment center**

Hashemi Nejad Hospital

Full name of responsible person

morteza shahrokhi

Street address

Hashemi Nejad Hospital, Mofatkeh Street

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Sponsors / Funding sources**1****Sponsor****Name of organization / entity**

Sabzevar University of Medical Sciences

Full name of responsible person

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Prdis of Sabzevar University of Medical Sciences,
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Drghorat@gmail.com

Grant name**Grant code / Reference number****Is the source of funding the same sponsor organization/entity?**

Yes

Title of funding source

Sabzevar 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**

Sabzevar University of Medical Sciences

Full name of responsible person

Morteza shahrokhi

Position

Masters Degree in Nursing

Latest degree

Bachelor

Other areas of specialty/work

Nursery

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

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Full name of responsible person

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Position

Masters Degree in Nursing

Latest degree

Bachelor

Other areas of specialty/work

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Person responsible for updating data

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Masters Degree in Nursing
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Other areas of specialty/work
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Razavi Khorasan
Postal code

Sharing plan

Deidentified Individual Participant Data Set (IPD)

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

Study Protocol

Undecided - It is not yet known if there will be 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

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

Clinical Study Report

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

Analytic Code

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

Data Dictionary

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