Clinical Trial Protocol
Iranian Registry of Clinical Trials

18 Sep 2026

The effect of planned lung physiotherapy on arterial blood gas parameters in patients undergoing mechanical ventilation

Protocol summary

Study aim
Determination of the effect of lung therapy on arterial blood parameters for patients under mechanical ventilation
Design
clinical trial of crossover، has two groups, with cross - groups, randomized
Settings and conduct
fourty ICU patients will be entered into the study. patients will be randomly allocated to two groups. the first group will be riecived planned lung physiotherapy and routine lung physiotherapy in first day, then after 24 hour wash out, they riecived only routine physiotherapy in second day. second group will be riecived only routine lung physiotherapy in first day, then after 24 hour wash out, they riecived planned and routine lung physiotherapy. arterial blood gas parameters will be analized before, half an hour later and 8 hour later lung physiotherapy in both days.
Participants/Inclusion and exclusion criteria
Inclusion criteria: patients from 18 to 60 years, have arterial blood line, mechanical ventilated patients for 5 - 3 days. Exclusion criteria: patients with broken ribs, acute bleeding, high brain pressure, spinal cord surgery
Intervention groups
The intervention group includes patients who have received the planned lung physiotherapy and routine lung physiotherapy. The control group includes patients who receive only routine lung physiotherapy.
Main outcome variables
- PaO2 - PaCO2 - SaO2 - PH

General information

Reason for update
Acronym
IRCT registration information
IRCT registration number: **IRCT20181112041630N1**
Registration date: **2019-04-25, 1398/02/05**
Registration timing: **retrospective**

Last update: **2019-04-25, 1398/02/05**
Update count: **0**
Registration date
2019-04-25, 1398/02/05

Registrant information
Name
Fahime Soheili
Name of organization / entity
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Iran (Islamic Republic of)
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Recruitment status
Recruitment complete
Funding source

Expected recruitment start date
2018-04-21, 1397/02/01
Expected recruitment end date
2018-09-21, 1397/06/30
Actual recruitment start date
empty
Actual recruitment end date
empty
Trial completion date
empty

Scientific title
The effect of planned lung physiotherapy on arterial blood gas parameters in patients undergoing mechanical ventilation

Public title
The effect of lung physiotherapy on arterial blood gas
Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

patients undergoing mechanical ventilation for 3-5 days

Exclusion criteria:

the patients with rub fracture acute bleeding subcutaneous emphysema

Age

From **18 years** old to **60 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **40**

Randomization (investigator's opinion)

Randomized

Randomization description

Random sampling from patients with inclusion criteria was performed using random allocation software. after selecting the study sample, they were assigned to two groups using the random allocation software.

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Crossover

Other design features

This study is a randomized clinical trial of single - group crossover.

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

National Ethics Committee in biomedical research

Street address

shahid sadoughi

City

yazd

Province

Yazd

Postal code

8914937598

Approval date

2018-05-20, 1397/02/30

Ethics committee reference number

IR.SSU.REC.1397.013

Health conditions studied

1

Description of health condition studied

Diseases of the respiratory system

ICD-10 code

Z40-Z54

ICD-10 code description

Persons encountering health services for specific procedures and health care

Primary outcomes

1

Description

Arterial blood gas

Timepoint

Before, half an hour and eight hour after the intervention

Method of measurement

Arterial Blood Gas analizer machine

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group will be riecived planned lung physiotherapy involves the positional dranage, chest percution, chest vibration with the vibrator and the coughing induction and suctioning the airway secretions for 20 minutes.

Category

Rehabilitation

2

Description

Control group: They will be ricieved routine lung physiotherapy.

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

shahid sadoughi and seyedoshohada hospital in yazd

Full name of responsible person

fahime soheili

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Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Yazd University of Medical Sciences
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Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
Yes
Title of funding source
Yazd University of Medical Sciences
Proportion provided by this source
20
Public or private sector
Private
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
Yazd University of Medical Sciences
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Position
A master's degree of intensive care nursing student
Latest degree
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Sharing plan

Deidentified Individual Participant Data Set (IPD)
No - There is not a plan to make this available
Justification/reason for indecision/not sharing IPD
it is confidential
Study Protocol
No - There is not a plan to make this available
Statistical Analysis Plan
No - There is not a plan to make this available
Informed Consent Form
No - There is not a plan to make this available
Clinical Study Report
No - There is not a plan to make this available
Analytic Code
No - There is not a plan to make this available
Data Dictionary
No - There is not a plan to make this available