Clinical Trial Protocol
Iranian Registry of Clinical Trials

16 Sep 2026

A comparison between the impacts of the synchronized intermittent mandatory ventilation and minimum minute ventilation on physiological and hemodynamic parameters in patients admitted to the intensive care unite

Protocol summary

Study aim

Determination of the effect of synchronized intermittent mechanical ventilation and minimum minute ventilation modes on the physiological and hemodynamic parameters of patients admitted to the intensive care unit Determine the effect on vital signs, Medium arterial pressure and arterial blood gases

Design

This is an experimental cross-over clinical trial. The subjects were permuted block randomly assigned to two groups of control (45) and intervention (45). At first, one of the ventilation Modes is used in the first group and other ventilation mode in the second group, and after 6 hours, ventilation modes in the groups are changed, and the results of the analysis of arterial blood gases and the physiological parameters of the patient will be recorded on the checklist.

Settings and conduct

The site of the study is the Sabzevar Shahid Beheshti Emdad Hospital. Minimum minute ventilation and synchronized intermittent mechaniacal ventilation are used intersecting in two groups for 6 hours and In the end, the effects of ventilation modes are measured

Participants/Inclusion and exclusion criteria

Inclusion criteria: Patients under mechanical ventilation admitted to the special department, Age between 18 and 60 years, Stable hemodynamic Inclusion criteria :Symptoms of respiratory distress , Dysrhythmia during research, Unstable hemodynamic , Patients who can not be used minimum minute ventilation and synchronized intermittent mechanical ventilation as directed by the doctor, Chest trauma, Lung and diaphram damage

Intervention groups

Minimum minute ventilation modes and synchronized intermittent mechanical ventilation are used Intersecting in groups for 6 hours, At the end of each period, the effect of any ventilation mode is measured on the physiological and hemodynamic parameters

Main outcome variables

Improvement of physiological and hemodynamic parameters

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20180515039669N1**
Registration date: **2018-07-14, 1397/04/23**
Registration timing: **registered_while_recruiting**

Last update: **2018-07-14, 1397/04/23**
Update count: **0**

Registration date

2018-07-14, 1397/04/23

Registrant information

Name

Mahdi Ghorbanpour

Name of organization / entity

Country

Iran (Islamic Republic of)

Phone

+98 51 4464 3794

Email address

ems@medsab.ac.ir

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2018-06-05, 1397/03/15

Expected recruitment end date
2018-09-06, 1397/06/15
Actual recruitment start date
empty
Actual recruitment end date
empty
Trial completion date
empty

Scientific title
A comparison between the impacts of the synchronized intermittent mandatory ventilation and minimum minute ventilation on physiological and hemodynamic parameters in patients admitted to the intensive care unite

Public title
Comparison between the impacts of synchronized intermittent mandatory ventilation and minimum minute ventilation in patients admitted to the intensive care unite
Purpose
Treatment
Inclusion/Exclusion criteria
Inclusion criteria:
Patient under mechanical ventilation admitted to the intensive care unit Patients aged 18-60 years Stable hemodynamic (mean arterial pressure greater than 70 mm Hg)
Exclusion criteria:
Symptoms of respiratory distress and oxygenation and ventilation disorders Dysrhythmia during research Unstable hemodynamic (mean arterial pressure less than 70 mm Hg) Patients who can not use the Synchronized intermittent mechanical ventilation and Minimum minute ventilation modes as directed by the physician Chest trauma Lung and diaphragm damage
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: **90**
Randomization (investigator's opinion)
Randomized
Randomization description
Permuted block randomization
Blinding (investigator's opinion)
Not blinded
Blinding description
Placebo
Not used
Assignment
Crossover
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
No. 3,Abureyhan6, North Abureyhan,
City
Sabzevar
Province
Razavi Khorasan
Postal code
96176
Approval date
2018-05-09, 1397/02/19
Ethics committee reference number
1397.002.IR.MEDSAB.REC

Health conditions studied

1

Description of health condition studied
All patients have trauma except severe chest and lung trauma
ICD-10 code
ICD-10 code description

Primary outcomes

1

Description
Vital signs
Timepoint
At the beginning of the study, 15 minutes, 1 hour and 6 hours after the study
Method of measurement
Monitoring device

2

Description
Arterial blood gases
Timepoint
At the beginning of the study, 15 minutes, 1 hour and 6 hours after the study
Method of measurement
Arterial blood gas analyzer

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group:At first, applying the minimum minute ventilation mode for 6 hours and measuring and recording the physiological (vital signs and mean arterial pressure) and hemodynamics (arterial blood gases)parameters , and then changing the mode to synchronized intermittent mechanical ventilation mode For 6 hours, record the measured values as before and then compare the results with each other

Category
Treatment - Other

2

Description
Control group: Apply the synchronized intermittent mechanical ventilation mode initially for 6 hours and measure and record the physiological (vital signs and mean arterial pressure) and hemodynamic parameters (arterial blood gases) and then modify this mode to minimum minute ventilation mode For 6 hours, record the measured values as before and then compare the results with each other

Category
Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center
Shahid beheshti emdad hospital

Full name of responsible person
Mahdi ghorbanpour

Street address
No. 3,Abu Rihan 6,North Abu Rihan

City
Sabzevar

Province
Razavi Khorasan

Postal code
96176

Phone
+98 51 4464 3794

Email
ems@medsab.ac.ir

Web page address
http://www.medsab.ac.ir/

Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Sabzevar University of Medical Sciences

Full name of responsible person
Dr. Fereshteh Gharat

Street address
Sabzevar University of Medical Sciences,Kosar St, Tawhid Township.

City
Sabzevar

Province
Razavi Khorasan

Postal code
9617913112

Phone
+98 51 4401 8319

Email
ems@medsab.ac.ir

Web page address
http://www.medsab.ac.ir/index.aspx?siteid=1&pageid=2085

Grant name
Dr. Fereshteh Gharat

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
Mahdi Ghorbanpour

Position
Nurse

Latest degree
Bachelor

Other areas of specialty/work
Nursery

Street address
No. 3, Abu Rihan 6,North Abu Rihan.

City
Sabzevar

Province
Razavi Khorasan

Postal code
96176

Phone
+98 51 4464 3794

Email
ems@medsab.ac.ir

Web page address
http://www.medsab.ac.

Person responsible for scientific inquiries

Contact

Name of organization / entity
Sabzevar University of Medical Sciences
Full name of responsible person
Mahdi Ghorbanpour
Position
Nurse
Latest degree
Bachelor
Other areas of specialty/work
Nursery
Street address
No. 3, Aburiyhan 6., Sabzevar Town
City
Sabzevar
Province
Razavi Khorasan
Postal code
96176
Phone
+98 51 4464 3794
Fax
Email
ems@medsab.ac.ir
Web page address
http://www.medsab.ac.ir/index.aspx?fkeyid=&siteid=1&pageid=2262

Person responsible for updating data

Contact

Name of organization / entity
Sabzevar University of Medical Sciences
Full name of responsible person
Mahdi Ghorbanpour
Position
Nurse
Latest degree
Bachelor
Other areas of specialty/work
Nursery
Street address
No. 3, Aburiyhan 6., Sabzevar Town
City
Sabzevar
Province
Razavi Khorasan
Postal code
96176
Phone
+98 51 4464 3794
Fax
Email
ems@medsab.ac.ir
Web page address
http://www.medsab.ac.ir/index.aspx?fkeyid=&siteid=1&pageid=2262

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
No more information
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