

Clinical Trial Protocol

Iranian Registry of Clinical Trials

01 Jun 2026

Effect of progressive change position program on lung health in patients undergoing mechanical ventilation

Protocol summary

Summary

The aim of the study: The application of progressive change position program in lung health in patients undergoing mechanical ventilation. Design of study: Progressive change position program is gradually putting the patient in the chair position that 3 times a day and in three different shifts, for 4 days, will be done and Includes the following steps: The head of the bed at an 45 degrees and the foot of the bed an -75 degrees for 15 minutes; The head of the bed at an 60 degrees and the foot of the bed an -75 degrees for 15 minutes; The head of the bed at an 75 degrees and the foot of the bed an -75 degrees for 30 minutes. In this study, drug or chemical composition will not be used. In this study of the ergonomics rule is used to determine the angles of the bed. Healthy lungs in this study is the respiratory index in the range of natural and not infection to mechanical ventilation pneumonia. Sampling method: Completely randomized block design Study population: All newly admitted patients under mechanical ventilation tube in the ICU. Inclusion criteria: Age between 18 to 65 years; Having oral endotracheal tube; Connected to a mechanical ventilator; Lack of previous pneumonia by chest radiography; Lack of Immunosuppressive diseases; Lack of Immunosuppressive drug; Lack of damage to the spine and being permitted to impose conditions according to intensive care specialist. Exclusion criteria: The patient died during the study; Leaving the endotracheal tube at the time of the study; The separation of mechanical ventilation during the study; The risk of pneumonia after 24 hours according to intensive care specialist. Sample: 30 patients in each group Method: First newly admitted patients under mechanical ventilation tube in the ICU are evaluated for inclusion criteria and the patients with inclusion criteria are selected and investigated for mechanical ventilation pneumonia by intensive care specialist. The patients with pneumonia are removed and then the sampling, the samples in the intervention group or control will be done.

Then in the intervention group, 24 hours after admission, the progressive change position program until obtain exclusion criteria by the researcher and trained nurses will be done. Progressive change position program are as follows: The head of the bed at an 45 degrees and the foot of the bed an -75 degrees for 15 minutes The head of the bed at an 60 degrees and the foot of the bed an -75 degrees for 15 minutes The head of the bed at an 75 degrees and the foot of the bed an -75 degrees for 30 minutes In both groups, routine care will be alike. Respiratory parameters in intervention group (Respiratory rate, Tidal volume, Minute ventilation and Arterial oxygen saturation) before the program, half an hour after starting the program, immediately after and one hour after the end of the program will be measured and recorded. Respiratory parameters in control group (Respiratory rate, Tidal volume, Minute ventilation and Arterial oxygen saturation) at the same intervals as the intervention group will be recorded. 48 and 96 hours after study (Two times during the study) patients will be examined by colleague physician based on set criteria from pneumonia associated with mechanical ventilation, and cases of pneumonia associated with mechanical ventilation will be recorded.

General information

Acronym

IRCT registration information

IRCT registration number: **IRCT201110237874N1**

Registration date: **2011-12-18, 1390/09/27**

Registration timing: **registered_while_recruiting**

Last update:

Update count: **0**

Registration date

2011-12-18, 1390/09/27

Registrant information

Name

Narges Baghcheghi

Name of organization / entity

Hamadan University of Medical Sciences

Country

Iran (Islamic Republic of)

Phone

+98 81 1251 9636

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baghcheghi@umsha.ac.ir

Recruitment status

Recruitment complete

Funding source

Vice chancellor for research, Hamadan University of Medical Sciences

Expected recruitment start date

2011-11-01, 1390/08/10

Expected recruitment end date

2011-12-31, 1390/10/10

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effect of progressive change position program on lung health in patients undergoing mechanical ventilation

Public title

Effect of progressive change position program on lung health in patients undergoing mechanical ventilation

Purpose

Supportive

Inclusion/Exclusion criteria

Inclusion criteria: Age between 18 to 65 years; Having oral endotracheal tube; Connected to a mechanical ventilator; Lack of previous pneumonia by chest radiography; Lack of Immunosuppressive diseases; Lack of Immunosuppressive drug; Lack of damage to the spine and being permitted to impose conditions according to intensive care specialist. Exclusion criteria: The patient died during the study; Leaving the endotracheal tube at the time of the study; The separation of mechanical ventilation during the study; The risk of pneumonia after 24 hours according to intensive care specialist.

Age

From **18 years** old to **65 years** old

Gender

Both

Phase

2-3

Groups that have been masked

No information

Sample size

Target sample size: **60**

Randomization (investigator's opinion)

Randomized

Randomization description

Blinding (investigator's opinion)

Single 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 Hamadan University of Medical Sciences

Street address

Hamadan University of Medical sciences, Shahid Fahmideh St, Hamadan, Iran

City

Hamadan

Postal code

6516859593

Approval date

2011-10-26, 1390/08/04

Ethics committee reference number

16/35/9/2657/د/پ

Health conditions studied

1

Description of health condition studied

Mechanical ventilation pneumonia

ICD-10 code

(J44.0)

ICD-10 code description

lower respiratory infection

Primary outcomes

1

Description

Respiratory rate

Timepoint

Before starting the program, Half an hour after starting the program, Immediately after the end of program, An hour after the end of program

Method of measurement

Observation of values of respiratory rate in monitor ventilator

2

Description

Tidal volume

Timepoint

Before starting the program, Half an hour after starting the program, Immediately after the end of program, An hour after the end of program

Method of measurement

Observation of values of respiratory rate in monitor ventilator

3

Description

Oxygen saturation of arterial blood

Timepoint

Before starting the program, Half an hour after starting the program, Immediately after the end of program, An hour after the end of program

Method of measurement

Observation of values of arterial blood oxygen in pulse oximetry

Secondary outcomes

empty

Intervention groups

1

Description

The Intervention group: Implementing of progressive change position program Progressive change position program is gradually putting the patient in the chair position that 3 times a day and in three different shifts, for 4 days, will be done and Includes the following steps: The head of the bed at an 45 degrees and the foot of the bed an -75 degrees for 15 minutes; The head of the bed at an 60 degrees and the foot of the bed an -75 degrees for 15 minutes; The head of the bed at an 75 degrees and the foot of the bed an -75 degrees for 30 minutes. In this study, the ergonomics rule is used to determine the angles of the bed. In this study, drug or chemical composition will not be used.

Category

Prevention

2

Description

In control group, do not any intervention. In this group, as intervention group, routine work is performed.

Category

N/A

Recruitment centers

1

Recruitment center

Name of recruitment center

Hamadan Besat hospital

Full name of responsible person

Narges Baghcheghi

Street address

ICU, Besat hospital, Shahid Motahari Blv, Resalat Sq, Hamadan, Iran

City

Hamadan

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Vice chancellor for research, Hamadan University of Medical Sciences

Full name of responsible person

Ali Ghaleiha

Street address

Hamadan University of Medical sciences, Shahid Fahmideh St, Hamadan, Iran

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Hamadan

Grant name

Grant code / Reference number

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

Yes

Title of funding source

Vice chancellor for research, Hamadan 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

Hamadan University of Medical Sciences

Full name of responsible person

Narges Baghcheghi

Position

Mcs student in critical care nursing

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