

# 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

**Email address**

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

**City**

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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## Person responsible for scientific inquiries

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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*