Clinical Trial Protocol
Iranian Registry of Clinical Trials

16 Sep 2026

Study of the effect of breathing exercise on the incidence of atelectasis in patients undergoing jaw surgery

Protocol summary

Study aim
Determining the effect of respiratory training on the incidence of atelectasis in jaw surgery patients.

Design
The clinical trial has a community-based, practice-oriented control group, no blind, randomized

Settings and conduct
. For each person, the control of the lung, lung sounds, respiration depth, respiratory rate, respiratory rate, pulse rate, temperature and oxygen saturation is monitored and recorded by pulse oximetry with the help of two nurses. These cases, other than lung photogenesis, are examined and recorded on the first and second days after surgery. The depth of breathing, the rhythm of breathing and the lung sounds from 24 hours to the next are controlled. Patients with physicians who have symptoms of atelectasis after checking their symptoms and after 48 hours of patient diagnosis of terminal lupus erythematosus and atelectasis are taken from the internal expert opinion. Examples from Imam Khomeini Hospital and Taleghani Hospital Collected.

Participants/Inclusion and exclusion criteria
Age range of 15-60 years. Non preoperative pulmonary disease. No emergency surgery, and satisfaction of the company. Conditions of admission and non-entry conditions included: prolonged surgical procedure for more than 6 hours, any abnormality Chest, severe hemodynamic disorders.

Intervention groups
The control group receives routine care. The day before surgery, the intervention group received breathing exercises, which included three deep breathing with a bulb, a deep tail for three minutes (one to three), two effective coughs during exhalation, and the patients in the intervention group We ask them to begin these exercises about an hour after the end of the tracheal tube and do it at least three times a day at the time of awakening for two days after the operation.

Main outcome variables
Atelectazia

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20181216042005N1**
Registration date: **2019-06-04, 1398/03/14**
Registration timing: **registered_while_recruiting**

Last update: **2019-06-04, 1398/03/14**
Update count: **0**

Registration date
2019-06-04, 1398/03/14

Registrant information

Name
ZAHRA BASATI

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
2019-05-22, 1398/03/01

Expected recruitment end date
2019-08-22, 1398/05/31

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date

empty

Scientific title
Study of the effect of breathing exercise on the incidence of atelectasis in patients undergoing jaw surgery

Public title
Study of the effect of breathing exercise on the incidence of atelectasis
Purpose
Prevention
Inclusion/Exclusion criteria
Inclusion criteria:
Age range of 60-15 years Lack of preoperative pulmonary disease (pneumonia, chronic obstructive pulmonary disease, atelectasis, pleural effusion) Lack of emergency surgery Companies' satisfaction in the research by patients
Exclusion criteria:
Patient's desire to get out of study at every stage of work Any physical and mental illness Occurrence of unwanted complications after surgery The need for re-operation as a result of surgical complications Need more mechanical ventilation than 24 hours Prolonged surgical procedure for more than 6 hours Any chest abnormality Severe hemodynamic disorders
Age
From **15 years** old to **60 years** old
Gender
Both

Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: **30**
Randomization (investigator's opinion)
Randomized
Randomization description
One sample is assigned to randomly assigned block random sampling in two groups, and this study will continue until the number of samples has been completed. In this way, the researchers first determine a general sample size and then randomly assign a set of them to one group and assign the rest to the other group. To implement this randomization method, we perform the following. 1- Determine the total sample size and sample size ratio in the groups. 2- The sample number will be selected from random numbers of single digit numbers between 0 and 9. 3- For studies with two groups, the numbers 9-0 are divided into two equal blocks, which is the probability of allocating one person to each block of 0.5. Block 4-0 for the first group and block 9-5 for the second treatment can be used. 4- Based on the selected numbers of random numbers and blocks, it is clear that each person entering the study will be assigned to which group. Considering that with this sampling method, it is possible to execute a random sample randomization sample, and then add more samples to the model, so if one sample is excluded for any reason, another one can be replaced.
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 Kermanshah University of Medical Sciences
Street address
Central University of Medical Sciences, Shahid Beheshti Blvd.
City
Kermanshah
Province
Kermanshah
Postal code
6715847141
Approval date
2019-05-14, 1398/02/24
Ethics committee reference number
IR.KUMS.REC.1398.167

Health conditions studied

1

Description of health condition studied
Atelectazia
ICD-10 code
J22
ICD-10 code description
Unspecified acute lower respiratory infection

Primary outcomes

1

Description
Ateletzia
Timepoint
Before surgery and 48 hours after surgery
Method of measurement
Chest Radiology Photo

Secondary outcomes

empty

Intervention groups

1

Description
Intervention group : The day before surgery, with the researcher in the department, breathing exercises that include Three deep breathing with a bulb Performing, a deep tail during the counts of three (one to three), Performing two effective coughs during exhalation. The intervention group is trained and explanations are given about the importance of these exercises in preventing the postoperative complication of atelectasia. On the day of surgery, prior to going to the operating room, training is repeated, then assuring patients' learning and We ask them to begin these exercises about an hour after the extubation of the trachea and at least three times a day at the time of awakening for two days after the operation.

Category
Prevention

2

Description
Control group: receive routine care

Category
Diagnosis

Recruitment centers

1

Recruitment center

Name of recruitment center
Imam Khomeini Hospital

Full name of responsible person
Zahra Basati

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2

Recruitment center

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity
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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
Kermanshah 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
Kermanshah University of Medical Sciences

Full name of responsible person
Zahra Basati

Position
Student

Latest degree
Bachelor
Other areas of specialty/work
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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
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