Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Evaluation of necessity of obtaining chest x-ray after chest tube removalin patients with pneumothorax

Protocol summary

Study aim
Evaluation of necessity of obtaining chest x-ray after chest tube removal in patients with pneumothorax

Design
Clinical trial with an intervention group, with a parallel group; single blind, random

Settings and conduct
This study is conducted in Imam Reza Birjand Hospital, South Khorasan Province. 54 patients are randomly divided into two intervention groups (A) and (B).

Participants/Inclusion and exclusion criteria
Our study population, patients with pneumothorax hospitalized in Imam Reza Hospital, who had a chest tube implanted for them and whose chest tube was removed at the time of discharge, will be included in the study if they agree to conduct the research. Exclusion criteria: pleural effusion in the patient; the need to reinsert the chest tube after discharge (for example, due to accidents, lung diseases, etc.); hemothorax in the patient; symptoms immediately after removing the chest tube; mechanical ventilation and surgical intervention will be performed in the patient except chest tube insertion.

Intervention groups
The intervention groups are as follows: Group one (A): after pulling the chest tube, if there are no symptoms, CXR will be taken 2 hours later and if it is normal, they will be discharged, and in the second group (B): the group that After chest tube removal, if there are no clinical symptoms, they will be observed in the hospital for at least 4 hours, depending on the doctor's opinion, and then they will be discharged.

Main outcome variables
Taking a chest x-ray and inserting a chest tube

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20190618043934N20**
Registration date: **2023-09-13, 1402/06/22**
Registration timing: **prospective**

Last update: **2023-09-13, 1402/06/22**
Update count: **0**

Registration date
2023-09-13, 1402/06/22

Registrant information

Name
Zabihullah Mohaghegh

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
2023-09-23, 1402/07/01

Expected recruitment end date
2023-12-22, 1402/10/01

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
Evaluation of necessity of obtaining chest x-ray after chest tube removalin patients with pneumothorax

Public title

It is necessary to take a chest X-ray after removing the chest tube

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Chest tube removal during patient discharge Patient consent to participate in the study

Exclusion criteria:

Pleural effusion in the patient The need to reinsert the chest tube after discharge (for example, due to accidents, lung diseases, etc.) Hemothorax in the patient Symptoms immediately after removing the chest tube Mechanical ventilation Surgical intervention except for the installation of the chest tube

Age

No age limit

Gender

Both

Phase

N/A

Groups that have been masked

- Care provider

Sample size

Target sample size: **27**

Randomization (investigator's opinion)

Randomized

Randomization description

The placement of people in each group will be simple random and in a blocked method, in one of the two groups A (after pulling the chest tube if there are no symptoms, CXR was taken 2 hours later and they were discharged if they were normal.), group B (the group who were observed in the hospital for at least 4 hours after pulling the chest tube if there were no clinical symptoms, depending on the doctor's opinion, and then they were discharged). In this way, first, various blocks of four (AABB, BBAA, ABAB, BABA, ABBA and BABA) are created on different cards. One of these blocks will be randomly selected using the lottery method and the patients will be divided into one of two groups A or B. Then randomization is done for other patients as well. This will be done by the study manager.

Blinding (investigator's opinion)

Single blinded

Blinding description

Outcome evaluator: The study administrator (final year medical student) examines and records the desired variables without knowing the placement of patients in two groups.

Placebo

Not used

Assignment

Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Ethics Committee of Birjand University of Medical Sciences

Street address

Vice Chancellor for Research and Technology, Birjand University of Medical Sciences, Ghaffari Blvd, Birjand, South Khorasan, Iran.

City

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Province

South Khorasan

Postal code

9717811674

Approval date

2022-02-07, 1400/11/18

Ethics committee reference number

IR.BUMS.REC.1400.372

Health conditions studied

1

Description of health condition studied

Pneumothorax

ICD-10 code

J93.11

ICD-10 code description

Primary spontaneous pneumothorax

Primary outcomes

1

Description

Recurrent pneumothorax

Timepoint

Before entering the study and 5 days after discharge from the hospital

Method of measurement

Physical examination by the study manager and questions about the clinical symptoms of the patients

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: First intervention group: After chest tube removal, if there are no symptoms, CXR will be taken 2 hours after them, and if they are normal, they will be discharged.

Category

Treatment - Surgery

2

Description
Intervention group: The second intervention group: the group that after pulling the chest tube, if there are no clinical symptoms, they are observed in the hospital for at least 4 hours, depending on the doctor's opinion, and then they are discharged.
Category
Treatment - Surgery

Recruitment centers

1

Recruitment center
Name of recruitment center
Imam Reza Hospital_Birjand
Full name of responsible person
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Sponsors / Funding sources

1

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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
Birjand 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

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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
There is no need to publish individual patient information
Study Protocol
Undecided - It is not yet known if there will be 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
Undecided - It is not yet known if there will be a plan to make this available
Analytic Code
Undecided - It is not yet known if there will be a plan to make this available
Data Dictionary
Undecided - It is not yet known if there will be a plan to make this available