Clinical Trial Protocol
Iranian Registry of Clinical Trials

10 Jun 2026

Comparison Of Autogenic Drainage & Active Cycle Of Breathing Techniques In Patients With Pneumonia

Protocol summary

Study aim
To compare the effects of autogenic drainage and active cycle of breathing in pneumonia patients .

Design
In this RCT study, 16 individuals will be divided into 2 groups, interventional group 1 and interventional group 2 by Convenient sampling technique with parallel group design, enrolled between June 2021 and December 2021.

Settings and conduct
This RCT study will be conducted in Gulab Devi Hospital, Lahore, Pakistan. 16 individuals will b equally divided into 2 groups that are selected by Convenient sampling technique. We will randomly select patients, visiting Gulab Devi Hospital, that are easy to select.

Participants/Inclusion and exclusion criteria
INCLUSION CRITERIA: • Patients aged 35- 60 years with • PNEUMONIA SEVERITY INDEX (PORT SCORE) • CLASS I TO III • Moderate to severe Grades for Severity of a Pulmonary Function Test Abnormality EXCLUSION CRITERIA: • Patients with secondary pneumonia-that is, as a complication of dysfunction of respiratory muscles, • Chronic bronchitis, • Emphysema, or • Asthma • Patients with known pulmonary tuberculosis or lung cancer • Intellectually impaired

Intervention groups
In this study the sample size is 16, and is divided into 2 groups. Intervention group 1 and interventional group 2. Each group contain 8 individuals. Interventional group 1 will receive autogenic drainage along with percussion. Intervention group 2 will be given active cycle breathing technique along with percussion.

Main outcome variables
forced expiratory volume (FEV) forced 1 vital capacity (FVC) peak expiratory flow rate (PEFR) The oxygen hemoglobin saturation (SpO2)

General information

Reason for update

Acronym
nil

IRCT registration information
IRCT registration number: **IRCT20220111053693N1**
Registration date: **2022-01-21, 1400/11/01**
Registration timing: **retrospective**

Last update: **2022-01-21, 1400/11/01**
Update count: **0**

Registration date
2022-01-21, 1400/11/01

Registrant information

Name
Azed Ahsaan

Name of organization / entity
Riphah international university lahore

Country
Pakistan

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+92 335 6055553

Email address
azedahsaan786@gmail.com

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2021-06-05, 1400/03/15

Expected recruitment end date
2021-12-25, 1400/10/04

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
Comparison Of Autogenic Drainage & Active Cycle Of

Breathing Techniques In Patients With Pneumonia

Public title
Comparison Of Autogenic Drainage & Active Cycle Of Breathing Techniques In Patients With Pneumonia
Purpose
Supportive
Inclusion/Exclusion criteria
Inclusion criteria:
Patients aged 35- 60 years. PNEUMONIA SEVERITY INDEX (PORT SCORE) CLASS I TO III Moderate to severe Grades for Severity of a Pulmonary Function Test Abnormality
Exclusion criteria:
Patients with secondary pneumonia-that is, as a complication of dysfunction of respiratory muscles, Chronic bronchitis, Emphysema, Asthma Patients with known pulmonary tuberculosis or lung cancer. Intellectually impaired
Age
From **35 years** old to **60 years** old
Gender
Both

Phase
N/A
Groups that have been masked
No information
Sample size
Target sample size: **16**
Randomization (investigator's opinion)
Randomized
Randomization description
This study was conducted at Gulab Devi Chest Hospital Lahore, Pakistan. This study was randomized clinical trial. Total twenty subjects were assigned randomly by using Convenient sampling technique into two groups. we will randomly choose the patients who will visit the hospital, having pneumonia and those who will meet our inclusion criteria. These patients will be allocated in 2 groups according to our convivence.
Blinding (investigator's opinion)
Not blinded
Blinding description
Placebo
Not used
Assignment
Parallel
Other design features
nil

Secondary Ids

empty

Ethics committees

1

Ethics committee
Name of ethics committee
Riphah Ethical Committee
Street address
Township Lahore
City
Lahore
Postal code
42000
Approval date
2021-03-19, 1399/12/29
Ethics committee reference number
21985

Health conditions studied

1

Description of health condition studied
Pneumonia is inflammation of the lungs and fluid collection in the alveoli. The two most common organisms responsible for pneumonia in low-income countries are Streptococcus pneumoniae and Haemophilus influenzae . Children with pneumonia are treated with antibiotics, with hospitalisation and oxygen supplementation required in some cases, depending on disease severity. Accumulation of secretions in the airways due to respiratory infection contributes to the worsening of clinical symptoms and leads to an increase in airway resistance with each breath Signs and symptoms that are useful in diagnosing pneumonia are fever, tachypnoea, nasal flaring, cough, breathlessness, lower chest wall indrawing, and reduced oxygen saturation The gold standard for diagnosing pneumonia according to clinical guidelines is the presence of lung infiltrates indicated by chest radiography.
ICD-10 code
ICD-10 code description

Primary outcomes

1

Description
Forced Vital Capacity (FVC)
Timepoint
Measurements will be repeated after 4 weeks of 1st intervention.
Method of measurement
The pulmonary function variables which will be assessed would be the Forced Vital Capacity (FVC) with the use of a spirometer. A brief description about the assessment procedure including technical steps to obtain pulmonary function data and variables will be explained to each subject. After 2–3 tidal breaths, subjects will be asked to inhale deeply to total lung capacity and then immediately exhale rapidly (without any pause) through a disposable mouthpiece until as much air as possible has been expelled from the lungs. The test will be performed with each subject in in high sitting position. The assessment will be repeated 3 times after adequate rest. The average values of the forced vital capacity (FVC) will be recorded.

2

Description

Forced Expiratory Volume in one second (FEV1)

Timepoint

Measurements will be repeated after 4 weeks of 1st intervention.

Method of measurement

The pulmonary function variables which will be assessed would be the Forced Expiratory Volume in one second (FEV1) with the use of a spirometer. A brief description about the assessment procedure including technical steps to obtain pulmonary function data and variables will be explained to each subject. After 2–3 tidal breaths, subjects will be asked to inhale deeply to total lung capacity and then immediately exhale rapidly (without any pause) through a disposable mouthpiece until as much air as possible has been expelled from the lungs. The test will be performed with each subject in in high sitting position. The assessment will be repeated 3 times after adequate rest. The average values of forced expiratory volume in the first second (FEV1) will be recorded.

Secondary outcomes

1

Description

The oxygen hemoglobin saturation (SpO2).

Timepoint

Measurements will be repeated after 4 weeks of 1st intervention.

Method of measurement

The oxygen hemoglobin saturation (SpO2) will be assessed using a non-invasive pulse oximeter.

Intervention groups

1

Description

In this study the sample size is 16, and is divided into 2 groups. Intervention group 1 and interventional group 2. Each group contain 8 individuals. Interventional group 1 will receive autogenic drainage along with percussion. The autogenic drainage technique tends to be practiced in sitting, and consists of 3 phases:1. Un-sticking – this mobilizes secretions in the small airways at the bottom of the lungs. Technique: big breath out, small breath in2. Collecting – this gathers the secretions and pushes them up the lungs into the main airways. Technique: middle sized breaths in and out3. Evacuating – this gets the secretions right to the back of the throat where they can be coughed out easily. Coughing before this phase is discouraged. Technique: take in as much air as possible then slowly sigh out. Gentle active huffs then used to remove the secretions from the body through the mouth.

Category

Rehabilitation

2

Description

Intervention group 2 will be given active cycle breathing technique along with percussion. Active cycle breathing technique consists of 4 stages:1. Breathing control – This is gentle breathing to allow you to relax and concentrate. With your hands gently resting on your tummy, concentrate on feeling your tummy rise and fall with each gentle breath in and out. Your breath out should be slow, almost like a sigh.2. Thoracic expansion (deep breaths) – This gets the air right down to the bottom of the lungs where it can loosen the phlegm. The breath in through your nose should be nice and slow, you should be able to feel your lungs filling up, when you feel like you have as much air in as is possible I want you to hold it there just for a few seconds, then gently breathe out through your mouth nice and slowly.3. Forced expiration (huff) – This helps force the phlegm up and out of your lungs. To carry out the technique effectively you need to pretend you have a mirror in front of you; take a normal breath in then huff the air out as if you are steaming up the mirror. This sometimes causes an acute onset of coughing.4. Cough – This allows you to get the phlegm up and out of your mouth, coughs are tiring and so should only be completed when you feel like the phlegm is just in the back of your throat. If the technique is used following surgery, a towel can be held over the scar site to ease the pressure on the wound and reduce pain whilst coughing

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Gulab Devi Hospital Lahore, Pakistan

Full name of responsible person

Azed Ahsaan

Street address

Ward no 14, Near HBL Bank, Jampur, District Rajanpur, Pakistan

City

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42000

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Riphah International University , Lahore, Pakistan

Full name of responsible person

Qurat Ul Ain

Street address

28 M, Quaid-e-Azam, Industrial Estate, Kot Lakhpat, Lahore, Pakistan

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Grant name
Grant code / Reference number
Is the source of funding the same sponsor organization/entity?
No
Title of funding source
Riphah University
Proportion provided by this source
50
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
Other

Person responsible for general inquiries

Contact
Name of organization / entity
Riphah international university lahore
Full name of responsible person
Azed Ahsaan
Position
Student
Latest degree
Master
Other areas of specialty/work
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Person responsible for updating data

Contact
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Riphah international university lahore
Full name of responsible person
Azed Ahsaan
Position
Student
Latest degree
Master
Other areas of specialty/work
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Punjab
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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
nil
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
Yes - There is a plan to make this available
Clinical Study Report
Yes - There is a plan to make this available
Analytic Code

Yes - There is a plan to make this available

Data Dictionary

Yes - There is a plan to make this available

Title and more details about the data/document

nil

When the data will become available and for how long

nil

To whom data/document is available

nil

Under which criteria data/document could be used

nil

From where data/document is obtainable

nil

What processes are involved for a request to access data/document

nil

Comments

nil