

Clinical Trial Protocol

Iranian Registry of Clinical Trials

11 Sep 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 be 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

Phone

+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

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 convience.

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 a 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 contains 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 in. 2. Collecting – this gathers the secretions and pushes them up the lungs into the main airways. Technique: middle sized breaths in and out. 3. 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

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42000

Phone

+92 335 6055553

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azedahsaan786@gmail.com

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
Physiotherapy

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Person responsible for updating data

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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