

Clinical Trial Protocol

Iranian Registry of Clinical Trials

11 Sep 2026

Comparison of rib cage mobilization and diaphragmatic breathing on lung function in patients with COPD

Protocol summary

Study aim

To compare the effects of rib cage mobilization and diaphragmatic breathing on lung function in patients with COPD.

Design

Randomize clinical trial, not blind trial, 2 group.

Settings and conduct

Idrees teaching hospital Sialkot Cantt, Allama Iqbal memorial hospital Sialkot, Chest and gynae hospital Sialkot. The study was conducted within 6 months after the approval of synopsis.

Participants/Inclusion and exclusion criteria

Inclusion criteria: •Age 40 to 70 years, at least history of chronic obstructive pulmonary disease from 1 year •Altered dyspnea index •Decrease FEV1/FVC •chronic obstructive pulmonary disease Grade II and III Exclusion criteria: •Acute exacerbation of chronic obstructive pulmonary disease •Grade IV chronic obstructive pulmonary disease patients. •Patients with comorbidities •Patient in any life-threatening condition.

Intervention groups

Group A: Rib cage mobilization, postural drainage, breathing exercises(expiratory) Group B: diaphragmatic breathing, postural drainage, breathing exercises(expiratory) Pre interventional readings will be taken at baseline & post interventional readings at 6 weeks

Main outcome variables

level of dyspnea(Dyspnea index) and FEV1/FVC ratio (Spirometer)

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20210108049966N2**

Registration date: **2022-07-27, 1401/05/05**

Registration timing: **retrospective**

Last update: **2022-07-27, 1401/05/05**

Update count: **0**

Registration date

2022-07-27, 1401/05/05

Registrant information

Name

Shanza Tanveer

Name of organization / entity

Riphah International University

Country

Pakistan

Phone

+92 48 3215215

Email address

cheematanvir666@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2022-03-20, 1400/12/29

Expected recruitment end date

2022-04-25, 1401/02/05

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Comparison of rib cage mobilization and diaphragmatic breathing on lung function in patients with COPD

Public title

Comparison of rib cage mobilization and diaphragmatic breathing on lung function in patients with COPD

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Age 40 to 70 years, at least history of chronic obstructive pulmonary disease from 1 year Altered dyspnea index DecreaseFEV1/FVC

Exclusion criteria:

Acute exacerbation of chronic obstructive pulmonary disease Patient in any life-threatening condition. Patients with comorbidities Grade IV COPD patients.

Age

From **40 years** old to **70 years** old

Gender

Both

Phase

N/A

Groups that have been masked

No information

Sample size

Target sample size: **22**

Randomization (investigator's opinion)

Randomized

Randomization description

Randomization was done through sealed envelope method on sample size of 22 individuals selected on inclusion & exclusion criteria in order to minimize biasness. Written informed consent will be taken. Lottary method will be used for allocation. Number of chits will be equal to total sample size, odd numbers for Group A allocation and even numbers for group B allocation.Each patient will be requested to draw a chit from the box.

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**

Riphah International University

Street address

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

City

lahore

Postal code

54000

Approval date

2022-05-01, 1401/02/11

Ethics committee reference number

RCR/RCR & AHS/20/021

Health conditions studied**1****Description of health condition studied**

Chronic obstructive pulmonary disease, or COPD, refers to a group of diseases that cause airflow blockage and breathing-related problems.Shortness of breath known medically as dyspnea is often described as an intense tightening in the chest, air hunger, difficulty breathing, breathlessness or a feeling of suffocation. The FEV1/FVC ratio is the amount of air exhaled in the first second divided by all of the air exhaled during a maximal exhalation.

ICD-10 code

J44.9

ICD-10 code description

Chronic obstructive pulmonary disease, unspecified

Primary outcomes**1****Description**

level of dyspnea

Timepoint

Before treatment and after treatment (3rd week).

Method of measurement

dyspnea index

2**Description**

FEV1/FVC ratio

Timepoint

Before treatment and after treatment (3rd week).

Method of measurement

spirometer

Secondary outcomes

empty

Intervention groups**1****Description**

Intervention group: group-A= Rib cage mobilization was applied in group A for 3 weeks at 5 days per week in three different positions, in sitting, side lying for ribs 10th to 2nd, and supine lying for 1st rib.

Category

Treatment - Other

2**Description**

Intervention group: group-B= The deep breathing exercises were applied in group B for 3 weeks at 5 days per week in sitting position.

Category

Recruitment centers

1

Recruitment center

Name of recruitment center

Idrees teaching hospital Sialkot Cantt, Allama Iqbal memorial hospital Sialkot, Chest and gynae hosp

Full name of responsible person

Husna Haider

Street address

House no.1 block A muhafiz town, Sargodha

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40100

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+92 304 7924564

Email

cheematanvir666@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Riphah International University Lahore, Pakistan

Full name of responsible person

Husna Haider

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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

Riphah International University Lahore, Pakistan

Proportion provided by this source

100

Public or private sector

Private

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, Pakistan

Full name of responsible person

Husna Haider

Position

Student

Latest degree

Bachelor

Other areas of specialty/work

Physiotherapy

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Person responsible for scientific inquiries

Contact

Name of organization / entity

Riphah College of Rehabilitation Sciences (RCRS)

Full name of responsible person

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Position

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Other areas of specialty/work

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Person responsible for updating data

Contact

Name of organization / entity

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Full name of responsible person

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Position

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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 further decision & information is decided yet.

Study Protocol

Undecided - It is not yet known if there will be a plan to make this available

Statistical Analysis Plan

Undecided - It is not yet known if there will be a plan to make this available

Informed Consent Form

Undecided - It is not yet known if there will be 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