Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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

Treatment - Other

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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Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Riphah International University Lahore, Pakistan

Full name of responsible person
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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

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Position
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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
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