Clinical Trial Protocol
Iranian Registry of Clinical Trials

10 Jun 2026

Comparative Effect of Buteyko Breathing Technique and Lotorp Method Among COPD

Protocol summary

Study aim
To find out comparative effect of Buteyko Breathing Technique and Lotorp Method among COPD patients

Design
40 participants will be recruited. Two parallel groups, double blinded, randomized clinical trial with pre and post assessment.

Settings and conduct
Pulmonary Ward Gulab Devi Educational Complex

Participants/Inclusion and exclusion criteria
Inclusion Criteria Patients between age group of 40-65 years. Patients of both genders. Patients with mild or moderate COPD according to the GOLD criteria Exclusion Criteria: Patients with restrictive lung disease. Patients with any infection. Patients having uncontrolled asthma. Pregnant women. Risk of pneumothorax Low resting oxygen saturation(13) Unstable conditions, active infections and neurological condition Patients who cannot comply this technique

Intervention groups
Group A: It will be treated by Buteyko Breathing Technique Group B: It will be treated with Lotorp Method

Main outcome variables
Dyspnea measured using Modified Medical Research Council (MMRC) scale, Chest Expansion measured using Measuring tape, Pulmonary Function Tests using Diagnostic Spirometer and St George Respiratory Questionnaire

General information

Reason for update

Acronym
Effects of Lotorp Method Among COPD.

IRCT registration information
IRCT registration number: **IRCT20191117045462N24**
Registration date: **2024-08-29, 1403/06/08**
Registration timing: **retrospective**
Last update: **2024-08-29, 1403/06/08**
Update count: **0**

Registration date
2024-08-29, 1403/06/08

Registrant information

Name
Wajeeha Zia

Name of organization / entity
Riphah International University

Country
Pakistan

Phone
+92 42 35126110

Email address
wajeeha_z@yahoo.com

Recruitment status
Recruitment complete

Funding source

Expected recruitment start date
2024-07-16, 1403/04/26

Expected recruitment end date
2024-07-16, 1403/04/26

Actual recruitment start date
empty

Actual recruitment end date
empty

Trial completion date
empty

Scientific title
Comparative Effect of Buteyko Breathing Technique and Lotorp Method Among COPD

Public title
Comparative Effect of Buteyko Breathing Technique and Lotorp Method Among COPD

Purpose
Treatment

Inclusion/Exclusion criteria

Inclusion criteria:
Patients between age group of 40-65 years Patients of both genders. Patients with mild or moderate COPD according to the GOLD criteria
Exclusion criteria:
Patients with restrictive lung disease. Patients with any infection. Patients having uncontrolled asthma. Pregnant women Risk of pneumothorax Low resting oxygen saturation unstable conditions, active infections and neurological condition Patients who cannot comply this technique

Age
From **40 years** old to **60 years** old

Gender
Both

Phase
N/A

Groups that have been masked
No information

Sample size
Target sample size: **40**

Randomization (investigator's opinion)
Randomized

Randomization description
Taking into account the above mentioned inclusion and exclusion criteria, patients will be recruited into two groups labeled as 0 for group A and 1 for group B by simple random sampling through sealed opaque enveloped.

Blinding (investigator's opinion)
Double blinded

Blinding description
The study will be double blinded. The assessor physiotherapist and the patient both will be blinded. Although the consent form will be taken from the patient. But the patient will not be aware of the study. Accessor physiotherapist will be involved in the study. He or She must have 2 or 3 year experience in relevant domain. He will access the patient by defined outcome measure tools before the start of study at the end

Placebo
Not used

Assignment
Parallel

Other design features

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee
Riphah college of rehabilitation & Allied Health Sciences

Street address
25 Raza Saeed Rd, Bhabra Block M Gulberg III, Lahore, Punjab 25-M Block, Lahore

City
Lahore

Postal code
54660

Approval date
2024-07-16, 1403/04/26

Ethics committee reference number
RCS&AHS/REC/MS-CPPT

Health conditions studied

1

Description of health condition studied
Chronic Pulmonary Obstructive Disease

ICD-10 code
Chronic br

ICD-10 code description
J44.8

Primary outcomes

1

Description
Pulmonary function

Timepoint
Pre- Post Treatment

Method of measurement
Spirometer (Diagnostic)

2

Description
Dyspnea

Timepoint
Pre- Post Treatment

Method of measurement
Modified Medical Research Council Scale (MMRC)

3

Description
Chest expansion

Timepoint
Pre- Post Treatment

Method of measurement
Measuring Tape

4

Description
Disease Specific

Timepoint
Pre- Post Treatment

Method of measurement
St Georges Respiratory Questionnaire (SGRQ)

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group A: Buteyko breathing technique: Treatment to this groups will be performed twice a day, 3-5 times per week, for 3-4 months. . The idea behind it is that people tend to hyperventilate –to breathe faster and more deeply than necessary. Subjects in the Buteyko a groups were trained for 3–5 days and instructed to practice the exercises for 15 minutes twice daily, and for three months duration. Step 1: The ‘‘Control pause (CP)’’ breathing test Step 2: Shallow breathing Sit up straight Step 3: Putting it together Take Control pause Each patient was trained by Buteyko breathing technique twice per week, and the session was about (20 min). The first week each patient of this group trained by Buteyko breathing technique intensively for 4 days then the following 3 weeks were 2 sessions per week. The time of the session was in the morning at least two hours after meals. Each patient performed the BBT by himself at home twice daily (in the morning and in the evening, at least 2 h after meals) during the time of the study Buteyko Breathing Technique.

Category

Rehabilitation

2

Description

Intervention group B : Lotorp Method: Lotorp Method is a two-part therapy involving daily breathing exercises and massage of thoracic muscles at the clinic every third week. The treatment at the clinic is performed for a time of about 60 min. It starts massage based on classic Swedish massage, combined with trigger point treatment if the therapist finds specially tense points in the muscles. On the larger muscles are performed a little faster rubbing movement. The patient lies on his/ her stomach when the back is treated. Back muscles and tendons treated with deep massage are: Erector ṣpinae, (the sacro spinal system),Rhomboids major and minor, Quadratus lumborum, and external intercostal muscles, Sternum (several muscles attach to the sternum, and a rubbing movement is used to stimulate these attachments),Subclavius, Serratus anterior (upper parts), Scalene Sternocleidomastoids, Diaphragm (external front part), abdominal muscles (transverses abdominis, oblique, internusabdominis, externus abdominis and rectus abdominis). After this exhalations are manually assisted during exhalation by pressing the chest, slowly but powerfully. The hands are placed along the side of the chest and deep exhalations are performed 10 times. Then the hands are moved to the upper parts of the chest. A similar manual pressure during exhalation is performed 5 times. After this the patient is instructed to breathe in and out so that the thorax is moving as much as possible. Treatment to this groups will be performed twice a day, 3-5 times per week, for 3-4 months.

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center
Gulab Devi Trust Hospital Lahore

Full name of responsible person
Gulab Devi Trust Hospital Lahore

Street address
F8MV+5HW, Ferozepur Rd, Nishtar Town, Lahore, Punjab 54000

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Recruitment center

Name of recruitment center
Gulab Devi Trust Hospital

Full name of responsible person
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Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Riphah International University

Full name of responsible person
Wajeeha Zia

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Grant name

Nill

Grant code / Reference number

Is the source of funding the same sponsor organization/entity?

No

Title of funding source

Riphah International University Lahore

Proportion provided by this source

15

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

Academic

Person responsible for general inquiries

Contact

Name of organization / entity

Riphah International University

Full name of responsible person

Muhammad Umer Arshad

Position

Head of Department

Latest degree

Master

Other areas of specialty/work

Physiotherapy

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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 information

Study Protocol

No - There is not 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