

Clinical Trial Protocol

Iranian Registry of Clinical Trials

10 Jun 2026

Effects Of Dynamic Hug Exercise And Serratus Punch On Chest Wall Mobility, Dyspnea, Pulmonary Function Test And Strength Of Scapulothoracic Muscle In COPD

Protocol summary

Study aim

To find the effects of Dynamic Hug Exercise and Serratus Punch on Chest wall mobility, Dyspnea, Pulmonary function test and Strength of scapulothoracic muscle in COPD patients.

Design

Two parallel groups, single-blinded, Randomized Controlled Trial with pre and post-assessment.

Settings and conduct

Gulab Devi Hospital Lahore

Participants/Inclusion and exclusion criteria

Inclusion Criteria: • Stable mild to moderate COPD according to GOLD guidelines, • 40-60 years of age will be included. • Both genders will be included. • Stable hemodynamics (heart rate, blood pressure, temperature) • FEV1 \geq 50 Exclusion Criteria: • Subjects having any kind of Infective pulmonary conditions. • The subjects with acute exacerbation. • Uncontrolled hypertension • Fracture at the clavicle, scapula, humerus, sternum or spine within previous 2 months • Patients with any diagnosed neurological, orthopedic and cardiovascular disease

Intervention groups

Group A: it will be treated by pursed lip breathing, upper trapezius stretching. Group B: it will be treated by pursed lip breathing, upper trapezius stretching as well as dynamic hug and serratus punch.

Main outcome variables

Dyspnea: Medical Research Council (MRC) Dyspnea Scale
Pulmonary function test: Spirometry
Cest wall expansion : measuring tape
Pectoralis muscles, Lower trapezius and Serratus anterior strength: Handheld dynamometer

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20191117045462N21**

Registration date: **2024-07-31, 1403/05/10**

Registration timing: **prospective**

Last update: **2024-07-31, 1403/05/10**

Update count: **0**

Registration date

2024-07-31, 1403/05/10

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

2024-08-15, 1403/05/25

Expected recruitment end date

2024-12-15, 1403/09/25

Actual recruitment start date

empty

Actual recruitment end date

empty

Trial completion date

empty

Scientific title

Effects Of Dynamic Hug Exercise And Serratus Punch On

Chest Wall Mobility, Dyspnea, Pulmonary Function Test And Strength Of Scapulothoracic Muscle In COPD

Public title

Effects Of Dynamic Hug Exercise And Serratus Punch On Chest Wall Mobility, Dyspnea, Pulmonary Function Test And Strength Of Scapulothoracic Muscle In COPD

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Stable mild to moderate COPD according to GOLD guidelines 40-60 years of age will be included. Stable hemodynamics (heart rate, blood pressure, temperature) FEV1≥50

Exclusion criteria:

Subjects having any kind of Infective pulmonary conditions. The subjects with acute exacerbation. Uncontrolled hypertension Fracture at the clavicle, scapula, humerus, sternum or spine within previous 2 months Patients with any diagnosed neurological, orthopedic and cardiovascular disease

Age

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

Gender

Both

Phase

N/A

Groups that have been masked

- Outcome assessor

Sample size

Target sample size: **50**

Randomization (investigator's opinion)

Randomized

Randomization description

Patients who will meet the inclusion criteria will be recruited by convenient sampling technique and allocated to groups by simple randomization process using sealed opaque enveloped labeled as 0 for Group A and for 1 group B.

Blinding (investigator's opinion)

Single blinded

Blinding description

This is single blinded study. Although the patient will sign a consent form but still he will not be aware of other treatment group. Another physical therapist or assessor will be involved in the study. He/she must have a minimum of 2 years of clinical experience in the relevant domain. He will assess the patient by defined outcome measure tools before start, follow up and, at the end of the study.

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

RCR&AHS/REC/MS-CPPT

Health conditions studied

1

Description of health condition studied

COPD

ICD-10 code

J44.8

ICD-10 code description

Other specified chronic obstructive pulmonary disease

Primary outcomes

1

Description

dyspnea

Timepoint

pre post treatment

Method of measurement

Medical Research Council (MRC) Dyspnea Scale

2

Description

Pulmonary function test

Timepoint

pre, post treatment

Method of measurement

Spirometry

3

Description

Chest wall expansion

Timepoint

pre, post treatment

Method of measurement

inches tape

4

Description

scapulothoracic muscle strength

Timepoint

pre, post treatment

Method of measurement

Handheld dynamometer

Secondary outcomes

empty

Intervention groups

1

Description

Control group: it will be treated by pursed lip breathing (to inhale through the nose for several seconds with the mouth closed and then exhale slowly over 4 to 6 seconds through lips held in a whistling or kissing position. This cycle can be repeated for three to five breaths per session), upper trapezius stretching (Moderate stretching Hold stretch 60 sec. /time 5 times/set, 1 set/day 3 days/weeks, 8 weeks)

Category

Rehabilitation

2

Description

Intervention group: it will be treated by pursed lip breathing, upper trapezius stretching as well as dynamic hug (The subject will stand with the feet shoulder-width apart, elbows flexed at 90° and internally rotated at 90°, and shoulders abducted at 90°. The subject will push the handle using horizontal shoulder adduction and elbow extension until the hands touch together) and serratus punch (The patient will lie down on the floor. Then he will Raise both arms directly above shoulders and keep the elbows straight. Proceed to protract the shoulder blades by pushing them forwards (pushing the fists towards the ceiling)).

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Gulab Devi Hospital, Lahore.

Full name of responsible person

Kazmah Azeem

Street address

st # 103 h# 21 Ghazi park new shad bagh Lahore

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity

Riphah International University

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?

No

Title of funding source

Riphah International University

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

Kazmah Azeem

Position

student

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

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