Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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≥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
City
Lahore
Postal code
05475
Phone
+92 309 9071269
Email
qazam6942@gmail.com

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
Riphah International University
Full name of responsible person
Wajeeha Zia
Street address
25 Raza Saeed Rd, Bhabra Block M Gulberg III, Lahore, Punjab 25-M Block, Lahore
City
Lahore
Postal code
05475
Phone
+92 42 111 747 424
Email
wajeeha_z@yahoo.com
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
Street address
H # 21 St# 103 Ghazi Park New Shad Bagh Lahore
City
Lahore
Province
Punjab

Postal code
05475
Phone
+92 309 9071269
Email
qazam6942@gmail.com

Person responsible for scientific inquiries

Contact
Name of organization / entity
Riphah International University
Full name of responsible person
Wajeeha
Position
Assistant Professor
Latest degree
Ph.D.
Other areas of specialty/work
Physiotherapy
Street address
13-14-C-civic center, township near Hamdard Chowk, Lahore
City
Lahore
Province
Punjab
Postal code
05475
Phone
+92 42 35126110
Fax
Email
wajeeha_z@yahoo.com

Person responsible for updating data

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
Street address
H # 21 St# 103 Ghazi Park New Shad Bagh Lahore
City
Lahore
Province
Punjab
Postal code
05475
Phone
+92 309 9071269
Email
qazam6942@gmail.com

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