Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 2026

Effects of Inspiratory Muscle Training on Dyspnea and Daily Living Activity in the Management of Asthmatic Patients.

Protocol summary

Study aim
The aim of this study is to determine the effects of Inspiratory Muscle Training on Dyspnea and Daily Living Activity in the Management of Asthmatic Patients.

Design
Randomized, two parallel groups, single-blind, controlled trial with pre and post-assessment

Settings and conduct
WAPDA Teaching Hospital Complex, Lahore

Participants/Inclusion and exclusion criteria
Inclusion criteria: The age group of 20 to 40 years; Diagnosed with asthma according to the Global Initiative for Asthma criteria; Moderate cases (FEV1=50–79); Well-controlled hypertension or diabetes mellitus if exist; At least 12 months asthma diagnosed by a physician. Exclusion criteria: Pregnancy; Rib Fracture; Risk Of Pneumothorax; Neuromuscular disease; Unstable cardiovascular disease; Musculoskeletal disease; Pneumonectomy; Red flags like fever, night sweats, malaise.

Intervention groups
Intervention group: conventional asthmatic rehabilitation program along with inspiratory muscle training. Control group: conventional asthmatic rehabilitation program.

Main outcome variables
Functional pulmonary assessment using measurement of exercise capacity; 5 Times Sit to Stand Test for dyspnea; London Chest Activity of Daily Living scale for daily life.

General information

Reason for update

Acronym

IRCT registration information
IRCT registration number: **IRCT20191117045462N3**
Registration date: **2021-07-13, 1400/04/22**
Registration timing: **retrospective**
Last update: **2021-07-13, 1400/04/22**
Update count: **0**

Registration date
2021-07-13, 1400/04/22

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
2021-04-29, 1400/02/09

Expected recruitment end date
2021-06-30, 1400/04/09

Actual recruitment start date
2021-04-29, 1400/02/09

Actual recruitment end date
2021-06-30, 1400/04/09

Trial completion date
2021-07-10, 1400/04/19

Scientific title
Effects of Inspiratory Muscle Training on Dyspnea and Daily Living Activity in the Management of Asthmatic Patients.

Public title
Effects of Inspiratory Muscle Training on Dyspnea and Daily Living Activity in the Management of Asthmatic Patients.

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Diagnosed with asthma according to the Global Initiative for Asthma criteria. Moderate cases FEV1 =50–79 Well-controlled hypertension or diabetes mellitus if they have At least 12 months asthma diagnosed by a physician

Exclusion criteria:

Pregnancy Rib Fracture Risk Of Pneumothorax Neuromuscular disease Unstable cardiovascular disease Musculoskeletal disease Pneumonectomy Red flags like: fever, night sweats, malaise

Age

From **20 years** old to **40 years** old

Gender

Both

Phase

N/A

Groups that have been masked

- Investigator

Sample size

Target sample size: **30**

Actual sample size reached: **24**

Randomization (investigator's opinion)

Randomized

Randomization description

Patients will be recruited in the study through a convenient sampling technique and then will be randomly assigned to each group through Random Sampling sealed opaque enveloped. Labeled as 1 group A and 2 for group B. Half enveloped will be labeled with 1 and a half with labeled 2. If a patient gets the envelope with label 1 then will be treated in group A, and if a patient gets the envelope with label 2 that will be treated in group B.

Blinding (investigator's opinion)

Single blinded

Blinding description

Investigator will be blind. Assessment will be done by another therapist who will not be involved in treatment and data analysis.

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

13-14-C-civic center, township near Hamdard Chowk, Lahore

City

Lahore

Postal code

54000

Approval date

2642-02-16, 2020/11/27

Ethics committee reference number

RCR&AHS/REC/MS-CPPT

Health conditions studied

1

Description of health condition studied

asthmatic patient

ICD-10 code

J45

ICD-10 code description

Asthma

Primary outcomes

1

Description

effects of Inspiratory muscle training

Timepoint

Pre- Post treatment

Method of measurement

London Chest Activity of Daily Living scale

Secondary outcomes

1

Description

Dyspnea and Daily Living Activity

Timepoint

Pre-Post Treatment

Method of measurement

• Functional pulmonary assessment to measure exercise capacity• 5 Times Sit to Stand Test for dyspnea • London Chest Activity of Daily Living scale for daily life

Intervention groups

1

Description

Intervention group: Conventional asthmatic rehabilitation program along with inspiratory muscle training. Conventional asthmatic rehabilitation of the treatment which included pursed lip breathing, diaphragmatic breathing exercises and thoracic expansion exercises. 3 times/week with 10 repetitions/3 set/session/day.

Category

Rehabilitation

2

Description
Control group: Conventional asthmatic rehabilitation program. Conventional asthmatic rehabilitation of the treatment which included pursed lip breathing, diaphragmatic breathing exercises and thoracic expansion exercises along with inspiratory muscle training. The inspiratory muscle training will be performed using a incentive spirometer. The patient will be asked to breath in slowly through incentive spirometer after 10 inspiration. It will be repeated with few seconds of rest. The cycle of 10 inspiration for15 times 3 times/week with 10 repetitions/3 set/session/day.

Category
Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center
Riphah college of rehabilitation & Allied Health Sciences

Full name of responsible person
Nida Ghaffar

Street address
13-14-C-civic center, township near Hamdard Chowk, Lahore

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Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Riphah International University

Full name of responsible person
Wajeeha

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wajeeha_z@yahoo.com

Grant name
Educational

Grant code / Reference number

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

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
Nida Ghaffar

Position
student

Latest degree
Master

Other areas of specialty/work
Physiotherapy

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Person responsible for scientific inquiries

Contact

Name of organization / entity
Riphah International University

Full name of responsible person
Wajeeha

Position
Senior Lecturer

Latest degree
Ph.D.

Other areas of specialty/work
Physiotherapy

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Person responsible for updating data

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student

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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