

Clinical Trial Protocol

Iranian Registry of Clinical Trials

28 May 2026

Correlation of forced expiratory technique, chest physiotherapy, pursed lips breathing exercises on cardiorespiratory and renal parameters fitness in acute pneumonia patients in Multan

Protocol summary

Study aim

Aim of this study is to explore the correlates (B.P, pulse rate, oxygen saturation, glucose level, lipid profile, temperature, respiration rate) of young adults with acute pneumonia of Multan that are associated with body mass index and cardiorespiratory and renal parameters health.

Design

randomization single group design triple blinding study

Settings and conduct

Ch. Pervaiz Elahi Institute of Cardiology Multan.

Participants/Inclusion and exclusion criteria

Including criteria • Young adults • Age group of 18-30 • Acute pneumonia patient • Acute pneumonia patients from Multan • Good mental health Excluding criteria • Any type of physical disability • Acute pneumonia patients with active infection • Any type of mental disorder • Any type of major surgery • Older adults • Childs • Smear positive respiratory sample

Intervention groups

We take three groups. Group A Group B Group C In Group A we take 18 participants .They perform forced expiratory technique exercises. In Group B we take 17 participants .They perform chest physiotherapy exercises. In Group C we take 18 participants.They perform pursed lips breathing exercises.

Main outcome variables

This study will investigate the correlation of cardiorespiratory fitness and renal parameters with body mass index and in young adults with acute pneumonia of Multan and also investigate the respiratory improvements. We will expect the positive and negative correlation.

General information

Reason for update

Acronym

Cross sectional study

IRCT registration information

IRCT registration number: **IRCT20230718058826N2**

Registration date: **2023-08-28, 1402/06/06**

Registration timing: **prospective**

Last update: **2023-08-28, 1402/06/06**

Update count: **0**

Registration date

2023-08-28, 1402/06/06

Registrant information

Name

Perwasha Perwasha

Name of organization / entity

Muhammad Institute of Medical and Allied Sciences, Multan, Pakistan.

Country

Pakistan

Phone

+92 310 6562039

Email address

perwashaaseer123@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2023-09-01, 1402/06/10

Expected recruitment end date

2023-10-01, 1402/07/09

Actual recruitment start date

2023-09-01, 1402/06/10

Actual recruitment end date

2023-10-01, 1402/07/09

Trial completion date

2023-10-01, 1402/07/09

Scientific title

Correlation of forced expiratory technique, chest physiotherapy, pursed lips breathing exercises on cardiorespiratory and renal parameters fitness in acute pneumonia patients in Multan

Public title

Correlation of forced expiratory technique, chest physiotherapy, pursed lips breathing exercises on cardiorespiratory and renal parameters fitness in acute pneumonia patients in Multan

Purpose

Health service research

Inclusion/Exclusion criteria

Inclusion criteria:

• Young adults • Age group of 18-30 • Acute pneumonia patient • Acute pneumonia patients from Multan • Good mental health

Exclusion criteria:

• Any type of physical disability • Acute pneumonia patients with active infection • Any type of mental disorder • Any type of major surgery • Older adults • Childs • Smear positive respiratory sample

Age

From **18 years** old to **35 years** old

Gender

Both

Phase

1

Groups that have been masked

- Participant
- Investigator
- Data analyser

Sample size

Target sample size: **53**

Actual sample size reached: **53**

Randomization (investigator's opinion)

Randomized

Randomization description

We take three group • Group I with forced expiratory technique(1.Take 3—5 slow deep breaths, inhaling through the nose, exhaling through pursed lips, using diaphragmatic breathing. 2. Take a deep breath and hold it for 1—3 seconds. 3. Exhale from mid-to-low lung volume (to clear secretions from peripheral airways). 4. Take a normal breath in and then squeeze it out by contracting the abdominal and chest wall muscles, with the mouth and glottis open, while whispering the word “huff” (sounds like a forced sigh) during exhalation. Repeat several times. 5. As secretions enter the larger airways, exhale from high-to-mid lung volume to clear secretions from more proximal airways. Repeat maneuver 2—3 times. 6. Take several relaxed diaphragmatic breaths before the next cough effort.) • Group II with chest physiotherapy(CPT should be done 1-4 times a day, preferably half an hour before meals or one and half hour after meals. The total duration should not exceed 30 minutes with 3-6 minutes in each position.) • Group III with Pursed lips breathing exercise(Pursed lip breathing was to be done as a home exercise daily for 5 min thrice a day over a period of 6 weeks.)

Blinding (investigator's opinion)

Triple blinded

Blinding description

Triple Blinding.. In triple blinding participant do not know in which group they are evaluated. In triple blinding investigator are randomly evaluated. In triple blinding data analyser analyse the data.

Placebo

Not used

Assignment

Single

Other design features

Randomized single group desgin triple blinding study

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Muhammad Institute of Medical and Allied Sciences
Multan.

Street address

HBL street near sabazazar station bosan road Multan.

City

Multan

Postal code

66000

Approval date

2023-10-01, 1402/07/09

Ethics committee reference number

MIMAS /Ref/IRB/24/17

Health conditions studied

1

Description of health condition studied

Pneumonia

ICD-10 code

(J00-J99)

ICD-10 code description

Diseases of the respiratory system

Primary outcomes

1

Description

Improve cardiorespiratory and renal parameters.

Timepoint

4 days/week for 4 weeks

Method of measurement

• Pulse oximeter (choiceMMed), Digital Thermometer (certeza), Sphygmomanometer BP apparatus (Medisign Aneroid Sphygmomanometer MODEL: MC 2002), Glucose strips (on call plus), spirometer (besmed incentive), Cholesterol devise (beneCheck Multi-Monitoring Meter).

Urine output measurements. • Urine tests • Blood tests • Imaging tests • Removing a sample of kidney tissue for testing.

Secondary outcomes

empty

Intervention groups

1

Description

Intervention group: 1 Forced expiratory technique,
Intervention group 2 Chest physiotherapy exercises and
intervention group 3 Pursed lips breathing.

Category

Rehabilitation

Recruitment centers

1

Recruitment center

Name of recruitment center

Ch. Pervaiz Elahi Institute of Cardiology Multan.

Full name of responsible person

Dr.Perwasha

Street address

HBL street near sabazazar station bosan road Multan.

City

Multan

Postal code

66000

Phone

+92 310 6562039

Email

perwahanaseer123@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity

mimas

Full name of responsible person

imran durrani

Street address

HBL street near sabazazar station bosan road Multan.

City

Multan

Postal code

66000

Phone

+92 333 6120602

Email

imranahmadkhandurrani@gmail.com

Grant name

research grant

Grant code / Reference number

765478

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

Yes

Title of funding source

mimas

Proportion provided by this source

80

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

mimas

Full name of responsible person

Imran Ahmad Khan

Position

Assistant professor

Latest degree

Ph.D.

Other areas of specialty/work

Cardiology

Street address

HBL street near sabazazar station bosan road Multan.

City

Multan

Province

punjab

Postal code

66000

Phone

+92 61 6221111

Email

imranahmadkhandurrani@gmail.com

Person responsible for scientific inquiries

Contact

Name of organization / entity

mimas

Full name of responsible person

Perwasha

Position

med. doctor

Latest degree

Medical doctor

Other areas of specialty/work

Physiotherapy

Street address

HBL street near sabazazar station bosan road Multan.

City

Multan

Province

punjab

Postal code

66000

Phone

+92 61 6231111

Email

perwahanaseer123@gmail.com

Person responsible for updating data

Contact

Name of organization / entity

mimas

Full name of responsible person

perwasha

Position

med.doc

Latest degree

Medical doctor

Other areas of specialty/work

Physiotherapy

Street address

HBL street near sabazazar station bosan road Multan.

City

Multan

Province

punjab

Postal code

66000

Phone

+92 61 6221111

Email

perwahanaseer123@gmail.com

Sharing plan

Deidentified Individual Participant Data Set (IPD)

Yes - There is a plan to make this available

Study Protocol

Yes - There is a plan to make this available

Statistical Analysis Plan

Yes - There is a plan to make this available

Informed Consent Form

Yes - There is a plan to make this available

Clinical Study Report

Yes - There is a plan to make this available

Analytic Code

Yes - There is a plan to make this available

Data Dictionary

Yes - There is a plan to make this available

Title and more details about the data/document

Correlation of forced expiratory technique, chest physiotherapy, pursed lips breathing exercises on cardiorespiratory and renal parameters fitness in acute pneumonia patients in Multan

When the data will become available and for how long

after 4 weeks

To whom data/document is available

supervisor

Under which criteria data/document could be used

ethical consideration

From where data/document is obtainable

supervisor

What processes are involved for a request to access data/document

documentation

Comments

kindly consider for further evaluation