Clinical Trial Protocol
Iranian Registry of Clinical Trials

22 Nov 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 desgin 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 phyiotherapy 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
perwashanaseer123@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
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66000
Phone
+92 310 6562039
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perwashanaseer123@gmail.com

Sponsors / Funding sources

1

Sponsor
Name of organization / entity
mimas
Full name of responsible person
imran durrani
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Multan
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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
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Person responsible for scientific inquiries

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Position
med. doctor
Latest degree
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Other areas of specialty/work
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Person responsible for updating data

Contact

Name of organization / entity

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Full name of responsible person

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Position

med.doc

Latest degree

Medical doctor

Other areas of specialty/work

Physiotherapy

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City

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Phone

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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