Clinical Trial Protocol
Iranian Registry of Clinical Trials

13 Nov 2026

Assessment of effect of active cycle of breathing techniques (ACBT) on airway clearance in covid-19 patients

Protocol summary

Study aim

The aim of this study is to evaluate the effect of ACBT exercises on airway clearance in COVID-19 patients and to fill the research gap for both studies that will help patients in future to deal with post COVID complications more conveniently with cost effective procedures.

Design

100 covid-19 patients from both ICU and indoor were taken. ACBT treatment was applied. No placebo effect was used. Non randomized, no biasness and not blinded.

Settings and conduct

study was conducted in ICU and indoor wards of different hospitals with proper use of PPE-protective personal equipment's.

Participants/Inclusion and exclusion criteria

Inclusion criteria: Patients having the age range from 30-60 were selected. Patients who were admitted to ICU or COVID indoor patients were included. Patients who were conscious were selected for this study. Exclusion criteria: Individuals below age 30, without COVID or with other comorbidities were prohibited from our review. Patients with decreased awareness and conscious level were not included in the assortment criteria. Patients admitted to CCU were excluded

Intervention groups

A total of 100 patients were recruited including both males and females. They were taken for the application of active cycles of breathing techniques in different Indoors and ICU units from multiple hospitals in Lahore city. Prior to exercise subjects were evaluated with the help of a standardized questionnaire i.e. Interventions Evaluation on COVID-19 patients-Questionnaire. After getting the active cycles of breathing techniques patients were again evaluated with the Interventions Evaluation on COVID-19 patients-Questionnaire. All registered subjects were informed of the study protocol.

Main outcome variables

Oxygen saturation, Breathing rate, Forced expiratory volume, Body temperature, heart rate and blood pressure were important variables because they fluctuate differently in both gender

General information

Reason for update

Acronym

IRCT registration information

IRCT registration number: **IRCT20220825055791N1**
Registration date: **2022-09-15, 1401/06/24**
Registration timing: **retrospective**

Last update: **2022-09-15, 1401/06/24**
Update count: **0**

Registration date

2022-09-15, 1401/06/24

Registrant information

Name

Anam Yousaf

Name of organization / entity

Government College University Faisalabad

Country

Pakistan

Phone

+92 310 4722300

Email address

anamyousaf13@gmail.com

Recruitment status

Recruitment complete

Funding source

Expected recruitment start date

2022-04-24, 1401/02/04

Expected recruitment end date

2022-05-17, 1401/02/27

Actual recruitment start date

2022-04-24, 1401/02/04

Actual recruitment end date

2022-05-17, 1401/02/27

Trial completion date

2022-05-17, 1401/02/27

Scientific title

Assessment of effect of active cycle of breathing techniques (ACBT) on airway clearance in covid-19 patients

Public title

effect of active cycle of breathing techniques (ACBT) in covid-19 patients

Purpose

Treatment

Inclusion/Exclusion criteria

Inclusion criteria:

Patients having the age range from 30-60 were selected. Patients who were admitted to ICU or COVID indoor patients were included. Patients who were conscious were selected for this study.

Exclusion criteria:

Individuals below age 30, without COVID or with other comorbidities were prohibited from our review. Patients with decreased awareness and conscious level were not included in the assortment criteria. Patients admitted to CCU were excluded.

Age

From **30 years** old to **60 years** old

Gender

Both

Phase

3

Groups that have been masked

No information

Sample size

Target sample size: **100**

Actual sample size reached: **100**

Randomization (investigator's opinion)

Not randomized

Randomization description

Blinding (investigator's opinion)

Not blinded

Blinding description

Placebo

Not used

Assignment

Single

Other design features

One hundred COVID-19 patients, age group 30-60 years from both indoor and ICU were involved in this research.

Secondary Ids

empty

Ethics committees

1

Ethics committee

Name of ethics committee

Afro-Asian Institute

Street address

43-52 Khayaban-e-Kareem Rd, Near Nishter Metro Station

City

Lahore

Postal code

54000

Approval date

2022-07-27, 1401/05/05

Ethics committee reference number

AAI/IRB/DPT/2022/00149

Health conditions studied

1

Description of health condition studied

In this research Coronavirus (COVID-19) pandemic was studied. Patients with Obstructive pulmonary disease that is corona was studied to observe the ACBT treatment plan. Previous studies have shown that incidence of COVID-19 has increased more effectively among both gender ranges from 43% male and 57% female. Approximately, major population suffered with COVID-19 report fever, shortness of breath, cough, tachypnea, chest tightness, dyspnea, chills, high-grade temperature and even death.

ICD-10 code

U07

ICD-10 code description

COVID-19, virus identified

Primary outcomes

1

Description

Pre outcomes were breathing rate 48 breath pre minute. After interventions application results were improved breathing rate was 16-20 breath pre minute which was like normal people.

Timepoint

In this study patients were checked before and after the ACBT interventions applied. symptoms of berating compilation were assessed. cough, dyspnea, shortness of breath. The treatment application time was 2 weeks. Patient history was taken prior to treatment and after 2 weeks treatment plan.

Method of measurement

The patient examination was performed before and after the treatment by using the tool Interventions Evaluation on COVID-19 patients-Questionnaire to assess the impact of Coronavirus on people and exercises effects on airways clearance.

2

Description

Temperature was raised up to (103F) which represents body immune system activation against virus or other foreign agent. after treatment application temperature reduced to optimal level that is 37F.

Timepoint
In this study patients were checked before and after the ACBT interventions applied. Fever/pyrexia was the initial sign along with oxygen level during corona patient diagnosis. The treatment application time was 2 weeks. Patient history was taken prior to treatment and after 2 weeks treatment plan.

Method of measurement
The patient examination was performed before and after the treatment by using the tool Interventions Evaluation on COVID-19 patients-Questionnaire to assess the impact of Coronavirus on people and exercises effects on airways clearance.

3

Description
O2 saturation was less than 75% -80% before treatment applied an after treatment application O2 improve to >90%. ACBT proved more beneficial for COVID-19 patients.

Timepoint
In this study patients were checked before and after the ACBT interventions applied. O2 saturation vital sign was checked in corona patients every 24-hours because most deadly agent was oxygen vital. The treatment application time was 2 weeks. Patient history was taken prior to treatment and after 2 weeks treatment plan.

Method of measurement
The patient examination was performed before and after the treatment by using the tool Interventions Evaluation on COVID-19 patients-Questionnaire to assess the impact of Coronavirus on people and exercises effects on airways clearance.

Secondary outcomes

empty

Intervention groups

1

Description
Control group: COVID-19 population was targeted. Total 100 patients were taken. In this study pre and post vitals and required information history was taken. 2 groups was involved. One group is labelled as pre- group with no intervention applied and severe COVID-19 symptoms. The prior vitals then compared with post vitals after 2 weeks of treatment application to check outcome results. Procedure repeated 2- times a week. Treatment method was Active cycle of breathing techniques, use to reduced the pulmonary symptoms.

Category
Treatment - Other

2

Description
Intervention group: COVID-19 population was targeted. Total 100 patients were taken. 2nd group was labelled as Post- group and vitals and required information history was taken after 2 weeks of treatment application to check outcome results. Procedure repeated 2- times a week. Treatment method was Active cycle of breathing techniques, use to reduced the pulmonary symptoms. results compared to the prior vitals were 96% more satisfactory and ACBT proved beneficial for airway clearance in COVID-19 patients.

Category
Treatment - Other

Recruitment centers

1

Recruitment center

Name of recruitment center
Jinnah hospital

Full name of responsible person
Anam Yousaf

Street address
Shahdara lahore khadim colony street no.5

City
Lahore

Postal code
Shahdara lahore khad

Phone
+92 310 4722300

Email
anamyousaf13@gmail.com

Sponsors / Funding sources

1

Sponsor

Name of organization / entity
Govt. college university of Faisalabad

Full name of responsible person
Anam Yousaf

Street address
street no. 05, khadim colony, shahdara, lahore.

City
Lahore

Postal code
street no. 05, khadi

Phone
+92 310 4722300

Email
anamyousaf13@gmail.com

Grant name
Anam Yousaf

Grant code / Reference number

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

Title of funding source
Govt. college university of Faisalabad

Proportion provided by this source
100

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

Persons

Person responsible for general inquiries

Contact

Name of organization / entity

Govt. college university of Faisalabad

Full name of responsible person

Anam Yousaf

Position

medical student

Latest degree

Bachelor

Other areas of specialty/work

Physiotherapy

Street address

street no. 05, khadim colony, shahdara, lahore.

City

Lahore

Province

Punjab

Postal code

street no. 05, khadi

Phone

+92 310 4722300

Email

anamyousaf13@gmail.com

Person responsible for scientific inquiries

Contact

Name of organization / entity

Govt. college university of Faisalabad

Full name of responsible person

Anam Yousaf

Position

medical student

Latest degree

Bachelor

Other areas of specialty/work

Physiotherapy

Street address

street no. 05, khadim colony, shahdara, lahore.

City

Lahore

Province

Punjab

Postal code

street no. 05, khadi

Phone

+92 310 7722300

Email

anamyousaf13@gmail.com

Person responsible for updating data

Contact

Name of organization / entity

Govt. college university of Faisalabad

Full name of responsible person

Anam Yousaf

Position

Medical student

Latest degree

Bachelor

Other areas of specialty/work

Physiotherapy

Street address

Shahdara lahore khadim colony street no.5

City

Lahore

Province

Punjab

Postal code

Shahdara lahore khad

Phone

+92 310 4722300

Email

anamyousaf13@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

Assessment of effect of active cycle of breathing techniques (ACBT) on airway clearance in covid-19 patients

When the data will become available and for how long

starting 6 months after publication.

To whom data/document is available

This only available for people working in academic institutions or people working in businesses can also apply to receive it.

Under which criteria data/document could be used

it is an cosile study and researchers can approach this article by simply entering the MESH keys.

From where data/document is obtainable

For communication means contact anamyousaf13@gmail.com.

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

contact via mail or number mentioned.

Comments