



Musculoskeletal problems in post COVID – 19 patients.

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Abstract:

Backgrounds:- Coronavirus disease 2019 (COVID-19) is an emerging pandemic disease caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). This study shows musculoskeletal related problems after COVID - 19 infection in each age group with symptoms using post COVID -19 functional status scale. The aim of the current study was to assess musculoskeletal problems in post COVID -19 patients some of various age group.

Methodology: 50 post COVID-19 patients from PMT hospital DCH centre, Loni were randomly selected. The participants included were between the age group of 18-60 years. Participants responded through google forms that were created and distributed through various social media platforms. Participants were asked to fill the demographic data, self-framed questionnaire to assess musculoskeletal problems in post COVID-19 patients.

Result: The result obtained suggested that mean and standard deviation of Post COVID - 19 functional status scale for 50 samples were 37.62 ± 11.63 . Musculoskeletal symptoms are quite common aside from other multi-systemic symptoms in patients with COVID-19.

Conclusion:- The conclusion of this study a high prevalence of joint pain and Back pain in musculoskeletal problems after COVID-19.

Keywords: Post COVID-19 patients, musculoskeletal problems , post COVID-19 functional status scale

INTRODUCTION

A Novel coronavirus disease (COVID 19) is an infectious disease caused by a newly discovered coronavirus .¹ The new virus was subsequently named the “COVID -19”. The COVID -19 pandemic also known as the coronavirus pandemic, is a global pandemic of coronavirus disease 2019 caused by severe acute respiratory syndrome coronavirus (SARS-CoV-2).¹ The virus was first identified in December 2019 in WUHAN ,CHINA. ¹ The World Health Organization declared a public health emergency of International concern regarding COVID 19 on 30 January 2020 , and later declared a pandemic on 11 March 2020. As of 5 June 2021, more than 172 million cases have been confirmed , with more than 3.71 million confirmed deaths attributed to COVID 19 making it one of the deadliest pandemics in history. COVID 19 affects different people in different ways . Most infected people will develop mild to moderate illness and recover without hospitalization. ¹

The incidence of post COVID syndrome is estimated at 10-35% , while for hospitalized patients it may reach 85% Fatigue is the most common symptom reported in 17.5-72% of post COVID cases, followed by residual dyspnea with an incidence ranging from 10 - 40%. More than one third of patients with post COVID syndrome have pre-existing comorbidities , hypertension and diabetes mellitus being the most common. ² Patients with COVID-19 may develop chronic fatigue syndrome / myalgic encephalomyelitis , which presents with prolonged relapse of exhaustion , cognitive dysfunction ,depression and other symptoms after a minimal amount of activity. ² There the present study has been planned to study the Subsequent Effects of Musculoskeletal problems in post COVID-19 patient. The research question was Is there a prevalence of the musculoskeletal problems in post COVID – 19 patients.

METHODOLOGY

Source of data : post COVID- 19 patients

Setting : PMT hospital DCH centre, Loni .

Sample size : 50

Duration of the study : 4 months

Study type : Descriptive observational study

Sampling method : Convenient sampling

Tools : Post COVID - 19 Functional status scale version 2 july, 2020

Materials : 1. Informed consent

2 .Google form

SELECTION CRITERIA :-

Inclusion criteria :

1. Those willing to participate
2. post COVID 19 males and females
3. Age group 18 - 60
4. Post COVID 19 period should be < 3 months

Exclusion criteria :

Participants who are not willing to give an informed consent .

PROCEDURE

Institutional ethical consent was obtained from Dr.APJ Abdul Kalam college of physiotherapy, PIMS , Loni. As per the inclusion and exclusion criteria, 50 participants were selected. The procedure was explained to all the participants prior to the study. The google informed consent was circulated among 113 participants, out of which 50 participants were willing to participate in the study. The participants in the study had filled their demographic data. They were further assessed for musculoskeletal problems in post COVID -19 patients using post COVID -19 functional status scale .The post COVID - 19 subjects were then asked to fill the post COVID-19 functional status scale questionnaire short form in order to assess their musculoskeletal problems after post COVID-19 recovery. The information and the results of post COVID - 19 functional status scale questionnaire were further recorded and correlated to receive positive outcomes of association between them.

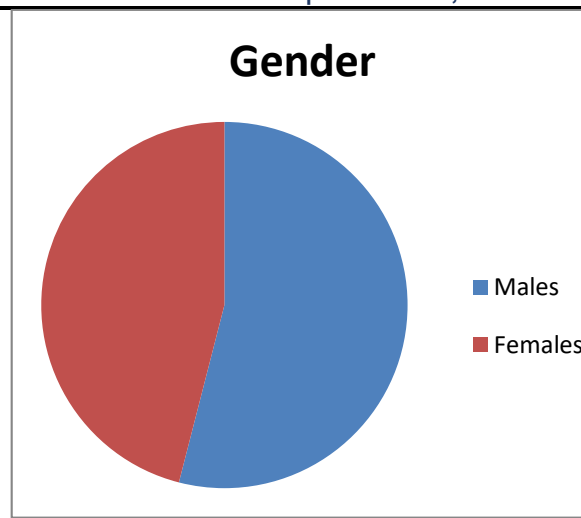
OUTCOME MEASURE -

Post COVID – 19 functional status scale

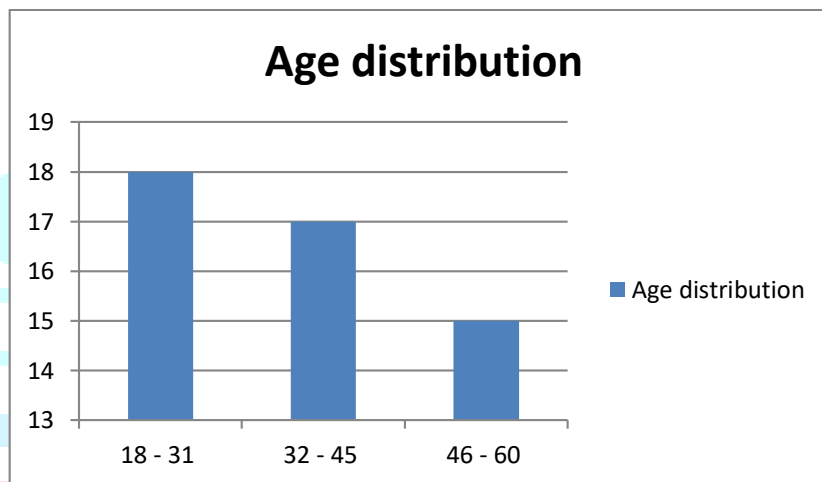
The scale is ordinal, has 6 steps ranging from 0 (no symptoms) to 5 (death, D), and covers the entire range of functional outcomes by focusing on limitations in usual duties/activities either at home or at work/study, as well as changes in lifestyle. The scale grades are intuitive and can easily be grasped by both clinicians and patients. The post-COVID-19 functional status is intended to be assessed 1) at the time of discharge from the hospital, 2) in the first weeks after discharge to monitor direct recovery, e.g. at 4 and 8 weeks post discharge, and 3) 3 months after a COVID-19 diagnosis to assess the degree of persistent disability.

RESULT -

The objective of the study was to find out the musculoskeletal problems in post COVID 19 patients ,using Post COVID 19 Functional status scale and to evaluate which all daily living activities are restricted because post COVID in post COVID -19 patients .Total of 113 samples were taken for the study considering the inclusion and exclusion criteria and who were willing to participate. The data of the study revealed that out of 50 participants who had musculoskeletal problems after post COVID-19, 23 were females and 27 were males. We observed that majority of the patients were from the age group of 18 – 31 years followed by 17 patients from age group of 32 – 45 years , 15 patients from age group of 46 – 60 years. Mean age is 16.67 years.



1.1 Count of Gender



1.2 Age distribution amongst study participants

SYMPTOMS	N0.of patients	PERCENTAGE
Dyspnoea	16	32%
Myalgia	02	4%
Joint pain		
1. Shoulder pain	05	10%
2. Knee pain	04	8%
Back pain	16	32%
Fatigue	02	4%
No	05	10%

1.3 Count of patients reporting post COVID-19 symptoms

DISCUSSION –

The present survey study was planned to see the effect of COVID - 19 infection on musculoskeletal system in post COVID-19 patients through the Post COVID -19 functional status scale used to assess the prevalence of musculoskeletal problems in post COVID-19 patients. With the line of objective of the present study, reveals that Musculoskeletal symptoms are quite common aside from other multi-systemic symptoms in patients with COVID-19. We took 50 number of sample size in that 36% people are belong from age group of 18 - 31 then 34% people are belong from age group of 32-45 And 30% population belong from age group of 46-60. In that 27 are males and 23 are females. In this study we used post COVID - 19 functional status scale questionnaire it shows 99% population do not require constant care only 1% people require constant care. Majority of population do not require assistance essential for eating only 4% people require assistance for eating. This study reveals that 10% population don't have any symptoms.

Majority of people having issues like dyspnoea and back pain commonly . 32% of the population facing dyspnoea and back pain. 4% people having myalgia and 4% people having fatigue . Others are complaining about joint pain in that commonly shoulder joint and knee pain . hence , there is a high prevalence of joint pain and back pain in post COVID - 19 patients.

CONCLUSION –

Based on this study results, Musculoskeletal symptoms are quite common aside from other multi-systemic symptoms in patients with COVID-19. Arthralgia is related to disease severity, and should be considered apart from myalgia. COVID-19 patients have severe myalgia regardless of the disease activity. Muscle involvement in COVID-19 disease seems to be related to hypoxia leading to severe ischemic myalgia and physical fatigue. Although there is a muscle weakness in all patients, the loss of muscle function is related with the disease activity especially in womens. Muscular involvement in corona disease is a triangle of myalgia, physical fatigue. The conclusion of this study a high prevalence of joint pain and back pain in musculoskeletal problems after COVID-19. There is a significant prevalence of the musculoskeletal problems in post COVID 19 patients.

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