

Prevalence of Musculoskeletal Post Covid Pain in COVID-19 Survivors

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Abstract: *Objective:* To find the prevalence of musculoskeletal post covid pain in covid-19 survivors. *Background:* The term long-covid is used when the patients suffer from symptoms even after recovering from covid-19. Pain is a common symptom of covid-19 as well as long- covid. *Participants:* 150 participants (68 males and 82 females, mean age=37.68±14.28 years) were included in the study. The mean number of days since covid-19 diagnosis was 299.62±63.59 days. Participants with known functional disabilities causing pain were excluded from the study. *Procedure:* All the individuals who had suffered from covid-19 infection were contacted. They were asked to fill out an online questionnaire and were also asked to mark painful areas on a body diagram. *Results:* About 20.66% of the participants reported musculoskeletal pain. Most common areas of pain were low back, neck, shoulder, calf and generalized pain. *Conclusion:* This study indicates that there is a prevalence musculoskeletal post covid pain in covid-19 survivors.

Keywords: covid-19, long covid, pain, musculoskeletal pain, covid-19 survivors.

1. Introduction

The novel coronavirus, severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), which causes a disease named coronavirus disease 2019 (COVID-19), emerged in China in December 2019 [6]. Its rapid worldwide spread leading to an unexpected pandemic has challenged as a global health threat [6]. The acute symptomatology is well known, including respiratory failure, thrombosis, kidney failure, etc., but the long-term symptoms are only now starting to bother patients during the subacute (3–6 months after infection) and chronic periods (longer than 6 months after infection) [3]. Persistent symptoms following coronavirus disease 2019 (COVID-19) have been described in a significant percentage of post-COVID individuals [4]. Post-COVID or long-COVID syndrome is the one in which recovering SARS-CoV-2 patients suffer from persistent and, often, debilitating symptoms extending several months past their initial diagnosis [5]. It is suggested that upwards of 20% of SARS-CoV-2-positive individuals go on to develop post-COVID syndrome [5]. Common symptoms include fatigue, shortness of breath, and cognitive dysfunction as well as others that generally have an impact on everyday functioning [3]. Pain is also a common symptom experienced during the post-COVID phase by individuals with long COVID

[1]. The pain of musculoskeletal origin (myalgia, arthralgia) is present in post-covid-19 individuals. According to our knowledge, only a few studies have found the prevalence of musculoskeletal pain in long-covid. Therefore, the main objective of this study was to find the prevalence of musculoskeletal post covid pain in covid-19 survivors.

2. Materials and Methodology

A. Study Design and Data Collection

This was an online survey conducted over a period of 2 months (April-May 2022). All the individuals who had suffered from covid-19 infection were contacted. Participants with known functional disabilities causing pain were excluded from the study. They were asked to fill out a questionnaire that included their consent for participation, demographic details, pain details, etc., and they were also asked to mark painful areas on a body diagram.

B. Statistical Analysis

Statistical analysis of the recorded data was done by using the software Instat. Data was calculated as mean, standard deviation, range for quantitative variables and frequency, and percentage for qualitative variables.

3. Results

There were a total of 150 participants included in the study. Out of this 68 were male and 82 were female participants. The mean age was 37.68±14.28 years and the range was 16–65 years. The mean number of days since covid-19 diagnosis was 299.62±63.59 days and the range was 186–396 days. 28% of participants were quarantined in the hospital, 64.66% of participants were quarantined at home and 7.33% of participants were quarantined in different settings.

About 20.66% of the participants reported musculoskeletal pain. Out of this 7.33% participants reported low back pain, 3.33% and 3.33% participants reported neck and shoulder pain respectively, only 1.33% participants reported calf pain and remaining 5.33% participants reported generalized pain.

4. Discussion

This study indicates that there is a prevalence of

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musculoskeletal post covid pain in covid-19 survivors. This also shows presence of long covid. Most studies found that the most common post-acute COVID-19 musculoskeletal symptoms were fatigue (71.8%), spine pain (70.7%) and myalgia (60.7%) and the most common pain region was the back (30.4%) [2]. Previous studies reported prevalence rates of musculoskeletal post-COVID pain from 45% to 60% [1]. The presence of widespread pain is in line with previous studies observing that 60% of COVID-19 survivors report multiple pain sites after hospital discharge and that 30% exhibit common clinical features of fibromyalgia syndrome (widespread pain) [1]. Many studies have also shown that almost 10% of individuals infected by SARS-CoV-2 will suffer from musculoskeletal post-COVID pain symptomatology at some time during the first year after the infection [7]. In our study the mean number of days since covid-19 diagnosis was 299.62 ± 63.59 days and the range was 186-396 days.

Previous literature shows the prevalence of musculoskeletal post covid pain [1], [3], [7]. One such study found that more than 50% of the participants indicated pain in the head/face and throat/neck, approximately 30%—or even more—indicated pain in the shoulder, front of the chest, spine, and feet and the most painful sites were the head (27%), chest (16%), legs (12%), or varied (15%) [3]. In the present study, it was found that about 20.66% of the participants report musculoskeletal pain. Out of this 7.33% participants reported low back pain, 3.33% and 3.33% participants reported neck and shoulder pain respectively, only 1.33% participants reported calf pain and remaining 5.33% participants reported generalized pain.

Most of the participants (79.33%) reported no post covid musculoskeletal pain. This could be because almost 64.66% of participants were quarantined at home when they had contracted a covid-19 infection and only 28% participants were hospitalized.

It must also be taken into consideration that the pain is a self-reported measure. It must be noted that no information regarding the intensity of pain was collected. It must also be noted headache was not considered.

5. Conclusion

This study indicates that there is a prevalence of musculoskeletal post covid pain in covid-19 survivors. Most common areas of pain were low back, neck, shoulder, calf and generalized pain.

Patient consent:

The study complied with the declaration of Helsinki. Participation of the respondents was anonymous and voluntary. Informed consent was sought from the respondents (and their parents when the respondent was under 18 years of age) at the beginning of the survey and the consent to publish the given data was also obtained.

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