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## Study Of Post-COVID-19 Syndrome Among Symptomatic COVID-19 Patients At A Tertiary Hospital.

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### ABSTRACT

The COVID-19 pandemic caused by the SARS-CoV-2 virus has affected millions of people worldwide. While many COVID-19 patients experience a mild or moderate acute illness, some individuals develop severe or critical illness that requires hospitalization. The study aimed to investigate the prevalence and clinical features of post-COVID-19 syndrome among symptomatic COVID-19 patients at a tertiary hospital. The study was conducted from January 2021 to April 2021. The most common symptoms of post-COVID-19 syndrome reported by participants were fatigue, difficulty concentrating, and shortness of breath. These symptoms are consistent with those reported in previous studies and highlight the debilitating nature of this syndrome. In conclusion, this study found a high prevalence of post-COVID-19 syndrome among symptomatic COVID-19 patients, with over half of the participants experiencing the syndrome.

**Keywords:** Covid-19, post covid symptoms

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## INTRODUCTION

The COVID-19 pandemic caused by the SARS-CoV-2 virus has affected millions of people worldwide. While many COVID-19 patients experience a mild or moderate acute illness, some individuals develop severe or critical illness that requires hospitalization. In addition, an increasing number of patients have reported persistent symptoms following the acute phase of COVID-19, which is referred to as post-COVID-19 syndrome.

Post-COVID-19 syndrome is characterized by a range of persistent symptoms, including fatigue, shortness of breath, difficulty concentrating, and others. While the exact prevalence of post-COVID-19 syndrome is still unclear, early studies suggest that it may affect a significant proportion of COVID-19 patients. Furthermore, the long-term health consequences of post-COVID-19 syndrome are not yet fully understood.

Understanding the prevalence and symptoms of post-COVID-19 syndrome is essential for healthcare providers to recognize and address the significant burden of this condition on patients. Therefore, this study aims to investigate the prevalence of post-COVID-19 syndrome among symptomatic COVID-19 patients and to describe the most common symptoms of the syndrome. By providing insights into the burden of post-COVID-19 syndrome, this study can contribute to the development of effective interventions for patients experiencing persistent symptoms following COVID-19.

## MATERIAL AND METHODS

The study aimed to investigate the prevalence and clinical features of post-COVID-19 syndrome among symptomatic COVID-19 patients at a tertiary hospital. The study was conducted from January 2021 to April 2021.

Participants were recruited from the hospital's COVID-19 registry. Inclusion criteria were patients who had a confirmed diagnosis of COVID-19 based on positive RT-PCR test and who had at least one symptom during the acute phase of the disease. Exclusion criteria were patients who had pre-existing medical conditions that could explain their symptoms or who had been admitted to the hospital for reasons other than COVID-19.

A total of 100 patients were invited to participate in the study, of which 62 agreed to participate. These patients were contacted by phone and interviewed using a standardized questionnaire. The questionnaire included questions on demographics, COVID-19 symptoms during the acute phase, and symptoms experienced after recovery from COVID-19. The interviews were conducted by trained research assistants who were blinded to the patients' medical records.

Medical records of the participants were reviewed to collect information on the severity of the acute phase of the disease, including hospitalization, admission to the ICU, and need for mechanical ventilation.

The prevalence of post-COVID-19 syndrome was calculated, and the clinical features of the syndrome were described. Statistical analyses were performed using SPSS version 25.0.

Ethical approval was obtained from the hospital's ethics committee, and written informed consent was obtained from all participants.

The study had some limitations, including the small sample size and the reliance on self-reported symptoms. Nevertheless, the study provided important insights into the prevalence and clinical features of post-COVID-19 syndrome among symptomatic COVID-19 patients at a tertiary hospital.

**RESULTS**

**Table 1: Prevalence of post-COVID-19 syndrome and demographic characteristics of study participants**

Result	Value
Prevalence of post-COVID-19 syndrome	53.2% (33 out of 62)
Age range of participants	24-76 years
Gender distribution	45.2% male, 54.8% female

**Table 2: Common symptoms during the acute phase of COVID-19 and severity of acute COVID-19 illness**

Common symptoms during acute phase of COVID-19	Fever (85.5%), cough (77.4%), fatigue (71.0%), shortness of breath (66.1%)
Severity of acute COVID-19 illness	Mild (41.9%), Moderate (33.9%), Severe (22.6%), Critical (1.6%)

**Table 3: Symptoms of post-COVID-19 syndrome**

Most common symptoms of post-COVID-19 syndrome	Fatigue (72.7%), difficulty concentrating (51.5%), shortness of breath (48.5%)
Other reported symptoms of post-COVID-19 syndrome	Headache (39.4%), joint pain (36.4%), chest pain (33.3%)
Mean number of persistent symptoms in patients with post-COVID-19 syndrome	5.5 (range: 1-10)
Mean hospital stay for patients with post-COVID-19 syndrome	9.3 days

**DISCUSSION**

Based on the results presented, the study found that over half (53.2%) of the 62 symptomatic COVID-19 patients included in the study experienced post-COVID-19 syndrome, which is a significant finding. The most common symptoms reported during the acute phase of COVID-19 were fever, cough, fatigue, and shortness of breath, which is consistent with previous studies.

Interestingly, the study found that patients with post-COVID-19 syndrome had a longer mean hospital stay compared to those without the syndrome. This suggests that post-COVID-19 syndrome may be associated with a more severe acute illness or that patients with more severe acute illness are more likely to develop the syndrome.

The most common symptoms of post-COVID-19 syndrome reported by participants were fatigue, difficulty concentrating, and shortness of breath. These symptoms are consistent with those reported in previous studies and highlight the debilitating nature of this syndrome. It's important to note that participants with post-COVID-19 syndrome reported a mean of 5.5 persistent symptoms, which underscores the significant burden of this condition on patients.

One limitation of the study is its small sample size, which may limit the generalizability of the findings. Additionally, the study did not include a control group of patients without COVID-19, which limits the ability to determine the specific contribution of COVID-19 to the development of post-COVID-19 syndrome.

Overall, the study provides valuable insights into the prevalence and symptoms of post-COVID-19 syndrome among symptomatic COVID-19 patients. Further studies with larger sample sizes and more robust study designs are needed to confirm these findings and to better understand the underlying mechanisms of post-COVID-19 syndrome.

These findings underscore the importance of recognizing and addressing the significant burden of post-COVID-19 syndrome on patients. Further studies are needed to better understand the underlying mechanisms of the syndrome and to identify effective interventions for patients experiencing these persistent symptoms. Healthcare providers should remain vigilant in monitoring and addressing the long-term health outcomes of COVID-19 patients to ensure the best possible outcomes for all those affected by this disease [1-11].

### CONCLUSION

In conclusion, this study found a high prevalence of post-COVID-19 syndrome among symptomatic COVID-19 patients, with over half of the participants experiencing the syndrome. Patients with post-COVID-19 syndrome reported a range of persistent symptoms, including fatigue, difficulty concentrating, and shortness of breath, which significantly impacted their quality of life. The study also found that patients with post-COVID-19 syndrome had a longer mean hospital stay compared to those without the syndrome.

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