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Original research article

PERSISTENT SYMPTOMS IN PATIENTS AFTER ACUTE COVID-19 INFECTION": A SINGLE CENTER EXPERIENCE: ARE WE DOING ENOUGH FOR THIS?

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Abstract: *This study aimed to determine the frequency of persistent COVID-19 symptoms after recovery from the infection. The study design was cross-sectional and conducted at the Department of Medicine, Fatima Memorial Hospital, Lahore. A non-probability consecutive sampling technique was employed, and the study duration was six months (from 28th June 2021 to 27th December 2021) after approval from the ethical committee. The sample size was 400. The study found that symptoms persisted for varying durations of less than one week, one to two weeks, two to four weeks, and more than four weeks. The most common persistent symptoms were lethargy (70.6%), body aches (55%), and cough (50%). The symptoms that persisted for more than four weeks were hair fall (71%), loss of smell and taste (53%), and body aches (43%). The mean duration of illness was two to four weeks from the start of the disease. The study concluded that COVID-19 infection was associated with residual symptoms that could persist for more than four weeks and affect patients' quality of life, interfering with daily life activities.*

Keywords: COVID-19, Infections, Persistence of Symptoms

Introduction

The SARS-CoV-2 virus causes the current COVID-19 pandemic life on earth is severely affected by the virus. The spectrum of COVID-19 disease ranges from patients without any significant symptoms to patients needing ICU care facilities. Patients with severe disease are complicated by multiple organ involvement and clotting abnormalities, resulting in fatal consequences (Rodriguez-Morales et al., 2020; Zheng et al., 2021).

The frequent signs and symptoms in the majority of cases include fever, fatigue, loss of smell and taste sensation, cough, shortness of breath, muscle aches and joint pains, and diarrhea (Wang et al., 2020). The average duration of these symptoms is 11.5±5.7 days (Lechien et al., 2020). Several studies showed that the symptoms last longer after recovery from the COVID-19 infection (Fjaeldstad, 2020; Landi et al., 2020). 68% of individuals had at least one persistent symptom after three months of follow-up, while 60 % had at least one sign at six months of follow-up, and the most common symptoms were fatigue, shortness of breath, arthralgias, and muscle pains. At six months, 24% of individuals had three or more persistent symptoms (Ghosn et al., 2021). Another study showed that 55% of patients had fatigue, 42% had shortness of breath, 34% had memory impairment, 30.8 % had insomnia, while 28% had concentration problems after a follow-up of the mean (±SD) of 110.9 (±11.1) days after admission (Garrigues et al., 2020).

Considering the significant impact of COVID on human life, it's the need of time to review all aspects of this disease, including the after-effects in patients who recovered from the infection. In this study, we will assess the frequency of persistent symptoms in our population after recovery from COVID-19.

Methodology

The study consisted of 400 patients selected using a continuous, non-probability sampling technique. Patients with a confirmed COVID-19 infection via COVID-19 ribonucleic acid (RNA) by polymerase chain reaction (PCR) or high-resolution computed tomography (HRCT) were included. Patients with recent onset acute viral/bacterial infection and those with known psychiatric illness were excluded.

Ethical approval was obtained from the hospital's ethical review board and informed written consent from the study participants. Descriptive analysis was performed on all variables, and frequencies and percentages were calculated for categorical variables. Bar charts were used for the graphical presentation of data. The data analysis was performed using SPSS version 28.

Results

There were 51% females and 49% males. Diagnostic testing was done in 90% of patients. Only 6.4% of patients were admitted to hospitals, and none were on mechanical ventilation. The symptoms observed in these patients are as follows: percentages.

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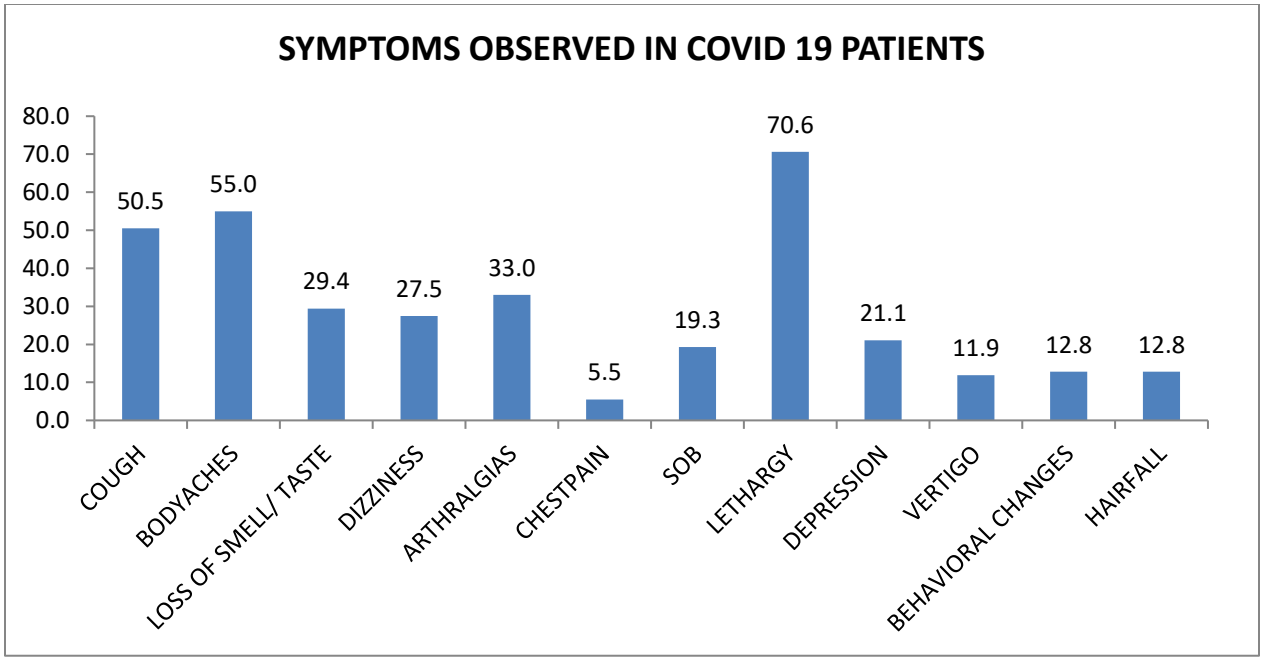
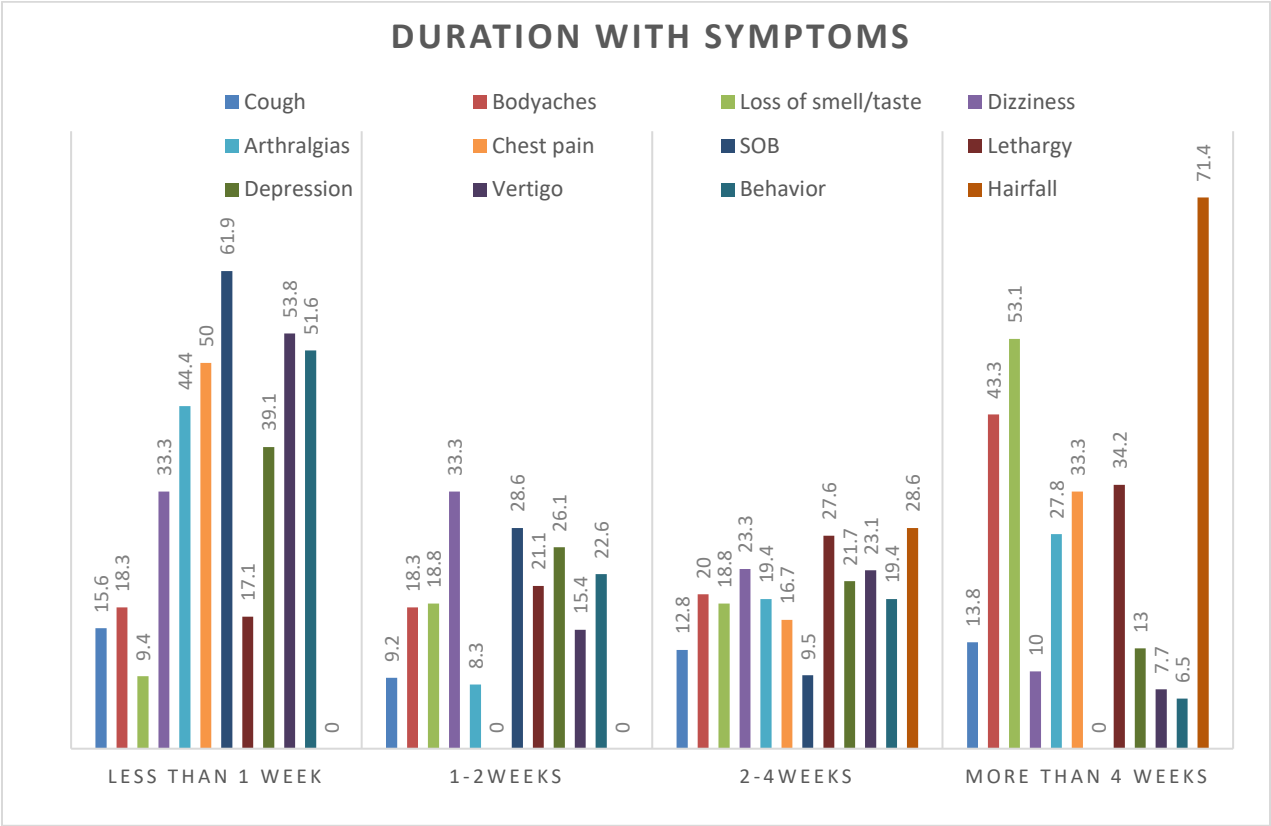


The duration of symptoms was observed over less than one week, 1-2 weeks, 2-4 weeks, and more than four weeks. The most common symptoms were lethargy 70.6%, body aches 55% and cough 50%. The majority of patients had improvement during the first week of illness. While one or two symptoms persisted for more than four weeks. The most common symptoms persisting for more than four weeks were hair fall in 71%, loss of smell and taste in 53%, and body aches in 43% of patients. The mean duration of illness was 2 to 4 weeks from the start of infection.



The most common symptom observed was lethargy and body aches.

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Discussion

Our study reveals that patients who recovered from COVID-19 infection had at least one symptom that lasted even after the COVID-19 infection was over; amongst all symptoms, fatigue and lethargy were the most common symptoms that lasted longer, and in contrast, A study conducted by Carfì A et al. conducted at the Fondazione Policlinico Universitario Agostino Gemelli IRCCS in Rome, Italy concluded that patients, who had recovery from COVID-19, there were total of (87.4%) patients who complained of fatigue and shortness of breath (Carfì et al., 2020).

However, the significant limitations of that study were scarce knowledge and severity index of symptoms before COVID-19 illness; this parameter is also comparable to our study.

Our study was conducted at a single center with a smaller sample size, and we did not have any control group of participants who were sent home safely for reasons other than COVID-19 illness.

A study conducted in England by Whitaker M and colleagues concluded that around (5.8%) of the adult population in England suffers from the persistence of one or more COVID-19 symptoms after the acute phase is over (Whitaker et al., 2022).

A study conducted by Righi E et al. revealed that a total of 37% of patients reported four symptoms, 42% of patients experienced symptoms lasting more than 28 days, and most of these patients reported fatigue, which was found in (11%) of patients and breathlessness in (8%) patients and it is also comparable to our study (Righi et al., 2022).

We have reached a consensus in our study that those patients were vulnerable to the persistence of COVID-19 symptoms even after acute infection was over, were patients with advanced age, prolonged ICU stay, and multiple symptoms at the start of acute infection, which ultimately had a negative effect on the physical and mental health of the individuals. Our study will show how to screen the patients at risk of developing long-term COVID-19 with persistent symptoms and devise a plan to recover from this persistence of symptoms known as long-term COVID-19.

Conclusion

The patients developing COVID-19 infection had a few symptoms, which took more than four weeks to resolve. COVID-19 disease imparts strong residual symptoms that can affect the quality of life of these patients and interfere with daily life chores. COVID-19 is an evolving viral infection, and further research is required to determine the impact of COVID-19 and the duration of this impact on the daily lives of patients.

Declarations

Data Availability statement

All data generated or analyzed during the study are included in the manuscript.

Ethics approval and consent to participate.

Approved by the department Concerned.

Consent for publication

Approved

Funding

Not applicable

Conflict of interest

Author contribution

The authors declared an absence of conflict of interest.

- *AIJAZ ZEESHAN KHAN CHACHAR* — *Conception of Study, Development of Research Methodology Design, Study Design, Review of Literature, Drafting article, Review of manuscript, final approval of manuscript*
- *SAHERISH RIAZ QURESHI* — *Conception of Study, Final approval of manuscript*
- *AFTAB HAIDER ALVI* — *Review of Literature, Drafting article*
- *MUHAMMAD SOHAIB* — *Data entry and Data analysis, drafting article*
- *SAJJAD ALI* — *Study Design, Review of Literature*
- *MAJDA ULFAT* — *Data entry and Data analysis, Drafting article*

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