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ORIGINAL RESEARCH

TO STUDY THE PATTERN OF POST COVID – 19 MANIFESTATIONS IN GROUP OF PATIENTS VISITING TERTIARY CARE HOSPITAL

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Abstract

Background: The present study was conducted for assessing the pattern of post COVID – 19 manifestations in group of patients visiting tertiary care hospital.

Materials & methods: A total of 100 survivors of COVID-19 were enrolled in the present study. Complete demographic and clinical details of all the patients was obtained. Clinical and radiographic examination of all the patients was carried out. A questionnaire was framed and was distribution to all the patients of the present study. Data in the questionnaire pertained to assessment of pattern of post-COVID manifestations, if any.

Results: Fatigue, dyspnoea and joint pain were the most common post COVID-19 manifestations found to be present in 82 percent, 62 percent and 42 percent of the patients respectively. Tinnitus and headache were seen in 22 percent of the patients each. Pulmonary fibrosis and renal failure were seen in 6 percent and 4 percent of the patients respectively. Overall, Post-COVID manifestations were seen in 90 percent of the patients.

Conclusion: Majority of the COVID-19 survivors exhibit manifestations similar to COVID-19. Hence; regular monitoring of COVID-19 survivors should be done.

Key words: COVID-19, Fever

Introduction

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) is the pathogen responsible for the coronavirus disease 2019 (COVID-19) pandemic, which has resulted in global healthcare crises and strained health resources. As the population of patients recovering from COVID-19 grows, it is paramount to establish an understanding of the healthcare issues surrounding them. COVID-19 is now recognized as a multi-organ disease with a broad spectrum of manifestations. Similar to post-acute viral syndromes described in survivors of other virulent coronavirus epidemics, there are increasing reports of persistent and prolonged effects after acute COVID-19.[1- 3]

The main reservoir is the upper respiratory tract, from where a swab is usually collected to diagnose COVID-19 disease. Recently, many studies have been conducted to investigate the otolaryngological symptoms related to COVID-19. Cough and anosmia are among the most commonly reported symptoms. Also, there were unanimously reported symptoms, such as ageusia, sore throat, nasal congestion, postnasal discharge, otalgia, runny nose, and hoarseness.[4, 5] Hence; the present study was conducted for assessing the pattern of post COVID – 19 manifestations in group of patients visiting tertiary care hospital.

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Materials & methods

The present study was conducted for assessing the pattern of post COVID – 19 manifestations in group of patients visiting tertiary care hospital. A total of 100 survivors of COVID-19 were enrolled in the present study. Complete demographic and clinical details of all the patients was obtained. Clinical and radiographic examination of all the patients was carried out. A questionnaire was framed and was distribution to all the patients of the present study. Data in the questionnaire pertained to assessment of pattern of post-COVID manifestations, if any. All the results were recorded in Microsoft excel sheet and were subjected to statistical analysis using SPSS software.

Results

Mean age of the patients was 51.3 years while their mean BMI was 28.1 Kg/m^2. 58 percent of the patients were males while the remaining were females. 42 percent of the patients were smokers. Fatigue, dyspnoea and joint pain were the most common post COVID-19 manifestations found to be present in 82 percent, 62 percent and 42 percent of the patients respectively. Tinnitus and headache were seen in 22 percent of the patients each. Pulmonary fibrosis and renal failure were seen in 6 percent and 4 percent of the patients respectively. Overall, Post-COVID manifestations were seen in 90 percent of the patients.

Table 1: Demographic profile

Variable	Number	Percentage
Males	29	58
Females	21	42
Mean age (years)	51.3	
Mean BMI (Kg/m^2)	28.1	
Smokers	21	42

Table 2: Post-COVID manifestation

Post-COVID manifestation	Number	Percentage
Fatigue	41	82
Anxiety	15	30
Joint pain	21	42
Headache	11	22
Chest pain	9	18
Dyspnoea	31	62
Tinnitus	11	22
Pulmonary fibrosis	3	6
Renal failure	2	4
Myocarditis	1	2
Others	5	10

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Discussion

Although COVID-19 is best known for causing fever and respiratory symptoms, it has been reported to be associated also with different extrapulmonary manifestations, including dermatological signs. Whilst the COVID-19-associated cutaneous manifestations have been increasingly reported, their exact incidence has yet to be estimated, their pathophysiological mechanisms are largely unknown, and the role, direct or indirect, of SARS-CoV-2 in their pathogenesis is still debated.[6, 7] Health care professionals and patients have reported symptoms long after recovery from the acute phase of COVID-19 infection. The Centers for Disease Control and Prevention has stated that COVID-19 has consequences for many organ systems. Recently published commentaries have reported the prevalence of long-term outcomes across a range of studies, albeit with minimal critical scrutiny. Most studies of COVID-19 risks have focused on mortality, which is highest among older populations, and have omitted or minimized the disease burden associated with persistent or long-term morbidity among individuals of all ages.[8- 10] Hence; the present study was conducted for assessing the pattern of post COVID – 19 manifestations in group of patients visiting tertiary care hospital.

Mean age of the patients was 51.3 years while their mean BMI was 28.1 Kg/m^2. 58 percent of the patients were males while the remaining were females. 42 percent of the patients were smokers. Fatigue, dyspnoea and joint pain were the most common post COVID-19 manifestations found to be present in 82 percent, 62 percent and 42 percent of the patients respectively. Tinnitus and headache were seen in 22 percent of the patients each. Our results were in concordance with the results obtained by previous authors who also reported similar findings. Kamal M et al characterised the manifestations which appear after eradication of the coronavirus infection and its relation to disease severity. About 287 survivors from COVID-19 were included. Only 10.8% of all subjects have no manifestation after recovery from the disease while a large percentage of subjects suffered from several symptoms and diseases. The most common symptom reported was fatigue (72.8%), more critical manifestations like stroke, renal failure, myocarditis and pulmonary fibrosis were reported by a few percent of the subjects. There was a relationship between the presence of other comorbidities and severity of the disease. Also, the severity of COVID-19 was related to the severity of post-COVID-19 manifestations. The post-COVID-19 manifestation is largely similar to the post-SARS syndrome.[10]

In the present study, pulmonary fibrosis and renal failure were seen in 6 percent and 4 percent of the patients respectively. Overall, Post-COVID manifestations were seen in 90 percent of the patients. Iqbal A et al, in a similar study evaluated post-recovery Symptoms among COVID-19 Survivors. An overwhelming majority (94.9%) experienced at least one post-COVID-19 symptom, with fatigue (82.9%) being the most prevalent post-discharge manifestation. We observed a significant correlation of post-COVID-19 symptoms with gender, age, and time since recovery. COVID-19 severity was found to be significantly related to the five dimensions of the QoL. A significant difference in EuroQol Visual Analog Scale health score was observed between the participants with mild, moderate, and severe COVID-19 infection ($p < 0.001$). Besides, the associated stigma with SARS-CoV-2 infection was found to be more prevalent in the participants belonging to the upper class as compared to the other classes ($p < 0.05$). Nonetheless, we also observed a significant association of

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disease severity with post-COVID-19 manifestations and pre-existing comorbidities. The long-COVID syndrome is similar to the post-discharge manifestations of the survivors of prior pandemics of SARS and Middle East respiratory syndrome (MERS).[11] Moreno-Pérez O et al analysed the incidence of Post-acute COVID-19 syndrome (PCS) and its components, and to evaluate the acute infection phase associated risk factors. A prospective cohort study of adult patients who had recovered from COVID-19 confirmed by PCR or subsequent seroconversion, with a systematic assessment 10–14 weeks after disease onset. Two hundred seventy seven patients recovered from mild (34.3%) or severe (65.7%) forms of SARS-CoV-2 infection were evaluated 77 days (IQR 72–85) after disease onset. PCS was detected in 141 patients (50.9%; 95%CI 45.0–56.7%). Symptoms were mostly mild. Alterations in spirometry were noted in 25/269 (9.3%), while in radiographs in 51/277 (18.9%). No baseline clinical features behaved as independent predictors of PCS development. A Post-acute COVID-19 syndrome was detected in a half of COVID19 survivors.[12]

Conclusion

Majority of the COVID-19 survivors exhibit manifestations similar to COVID-19. Hence; regular monitoring of COVID-19 survivors should be done.

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