

Pattern of Post-Covid Symptoms among COVID 19 Patients: A Study in Shaheed Ziaur Rahman Medical College Hospital, Bogura, Bangladesh

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Abstract

Original Research Article

Background: The first Covid 19 cases were detected in Bangladesh on the 8th March of 2020. It is a newer version of a viral disease and has a ferocious nature of affecting a large number of people within a couple of days. So, to save billions of people we have to acquire clear ideas about the pre as well as post symptoms and sufferings. In Bangladesh, we have very limited research-based information regarding those issues of Covid 19. **Aim of the Study:** The aim of this study was to assess the pattern of post-Covid symptoms among Covid 19 patients. **Methods:** This prospective observational study was conducted at Shaheed Ziaur Rahman Medical College Hospital, Bogura, Bangladesh during the period from January 2021 to December 2021. In total 93 previously confirmed positive Covid 19 was included as the study subjects for this study. This study was approved by the ethical committee of the mentioned hospital. Proper written consents were taken from all the participants before data collection. A predesigned questioner was used in data collection. All data were collected, processed and analyzed by using MS Office and SPSS version 23 programs as per need. **Results:** During the first follow-up (At 4-12 weeks as post-Covid 19) of this study as general symptoms, fatigue and weakness were found as 2 most frequent which were among 46% and 13% patients respectively. Besides these, cough, joint pain, muscle ache and loss of appetite were found in 9%, 10%, 8%, and another 9% patients which were noticeable. On the other hand, during the second follow-up (After 12 weeks as post-Covid 19) as general symptoms, fatigue and weakness were found as 2 most frequent which were among 33% and 11% patients respectively. Besides these, cough, dyspnea, muscle ache and loss of appetite were found in 5%, 4%, another 4%, and another 5% patients which were noticeable. **Conclusion:** Fatigue, cough, joint pain, muscle ache and loss of appetite may be considered as the most common post-Covid symptoms for Covid 19 patients. Usually, one out of four patients may suffer from one or more post-Covid symptoms during 4 to 12 weeks after discontinuing Covid 19 treatment tenure.

Keywords: Post-Covid, Symptoms, Covid 19, Comorbidities, SARS.

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1. INTRODUCTION

The novel coronavirus disease is by far the most concerning outbreak of atypical pneumonia since the far less detrimental 2003 outbreak of SARS (severe acute respiratory syndrome) [1]. After a couple of weeks from the outbreak of Covid 19 this pandemic has been declared as an international public health emergency by the WHO (World Health Organization) [2]. Within the 1st July of 2020, the Covid 19 pandemic has infected over ten million people across the world and causing more than 5,00,000 deaths [3]. The

unpredictable nature of Covid 19 can often trigger patient's psychological distress and mental illness, including anxiety, depression, and traumatic stress [4]. Now a day, post-Covid symptoms among Covid 19 patients have become major issues to the physicians as well as healthcare policy makers across the globe. Because, similar to the acute disease, that manifests in multiple ways, post-COVID individuals report a multitude of symptoms, involving different organ systems [5]. It is now understood that Covid 19 can impact on multiple organ systems [6] and that can lead

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to a diverse range of persistent symptoms like fatigue, cough, breathlessness, loss of taste and/or smell, memory issues myalgia, and gastrointestinal problems [7]. A very recent large survey conducted in the UK found that, 1.1 million people self-reported long Covid symptoms (LCS) that equates to 1.7% of the population [8]. The survey also found, 18.1% of the total participants reported that, their daily activities had been affected a lot by the illness, indicating that “long Covid symptoms has a detrimental impact on peoples’ daily lives, so should be taken seriously [9]. So far in Bangladesh, there are only two published studies on persistent symptoms following Covid 19 infection [10]. One survey conducted on 1002 individuals found that, 20% had experienced persisting symptoms after Covid 19, with diarrhea (12.7%) being the most common followed by fatigue in 11.5% cases [11].

2. METHODOLOGY

This prospective observational study was conducted at Shaheed Ziaur Rahman Medical College Hospital, Bogura, Bangladesh during the period from January 2021 to December 2021. In total 93 previously confirmed positive Covid 19 was included as the study subjects for this study. This study was approved by the ethical committee of the mentioned hospital. Proper written consents were taken from all the participants before data collection. Consent and questionnaire documents were provided as hard paper copies in Bengali for respondents to complete themselves. If there was a literacy issue then data collectors provided support with this to enable completion. As per the inclusion criteria of this study, were: only previously Covid 19 positive patients by RT-PCR test reported persistent symptoms and reported difficulties in undertaking usual daily activities were included as the study subjects. On the other hand, as per the exclusion criteria of this study, individuals too sick to participate, who declined consent and were unable to contact were excluded. Post-Covid symptoms were analyzed in two follow-ups. First one was performed at 4-12 weeks from RT-PCR negative report of patients and second

one was performed after 12 weeks from RT-PCR negative report of the participants. Screening for trial eligibility and consent for data collection was conducted using mobile telephones. Face to face data collection was undertaken via mutually convenient scheduled appointments either in the respondent’s house or workplace. A predesigned questioner was used in data collection. All data were collected, processed and analyzed by using MS Office and SPSS version 23 programs as per need.

3. RESULT

In this study, among total 93 participants, 61% were male whereas the rest 39% were female. So male participants were dominating in number and the male-female ratio was 1.6:1. The highest number of patients was from 20-30 years’ age groups which was 30%. Besides this, 26% and 16% were from 31-40 and 41-50 years’ age groups respectively which was noticeable. In analyzing the major comorbidities of our participants, we observed that, the highest number (20%) of patients were with hypertension (HTN) as a single comorbidity. Besides this, 15%, 10%, 5% and 4% participants were with DM (Diabetes mellitus), COPD, CHD (Coronary heart disease) and CKD (Chronic kidney disease) respectively. During the first follow-up (At 4-12 weeks as post-Covid 19) of this study as general symptoms, fatigue and weakness were found as 2 most frequent which were among 46% and 13% patients respectively. Besides these, cough, joint pain, muscle ache and loss of appetite were found in 9%, 10%, 8%, and another 9% patients which were noticeable. On the other hand, during the second follow-up (After 12 weeks as post-Covid 19) as general symptoms, fatigue and weakness were found as 2 most frequent which were among 33% and 11% patients respectively. Besides these, cough, dyspnea, muscle ache and loss of appetite were found in 5%, 4%, another 4%, and another 5% patients which were noticeable. In this study, during the first follow-up, 26% and during second follow-up, 16% patients were found with one or more comorbidities.

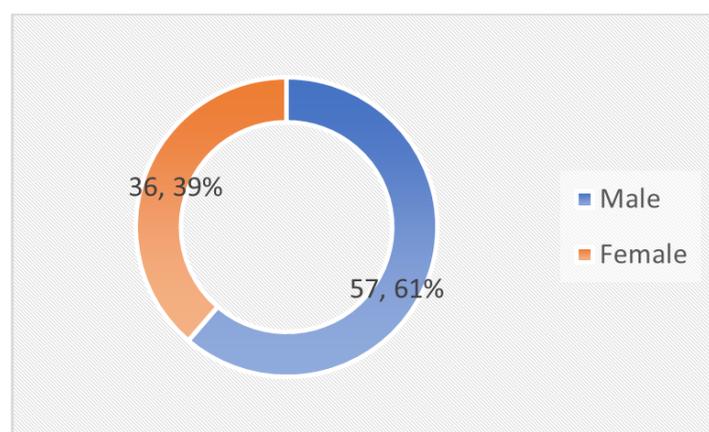
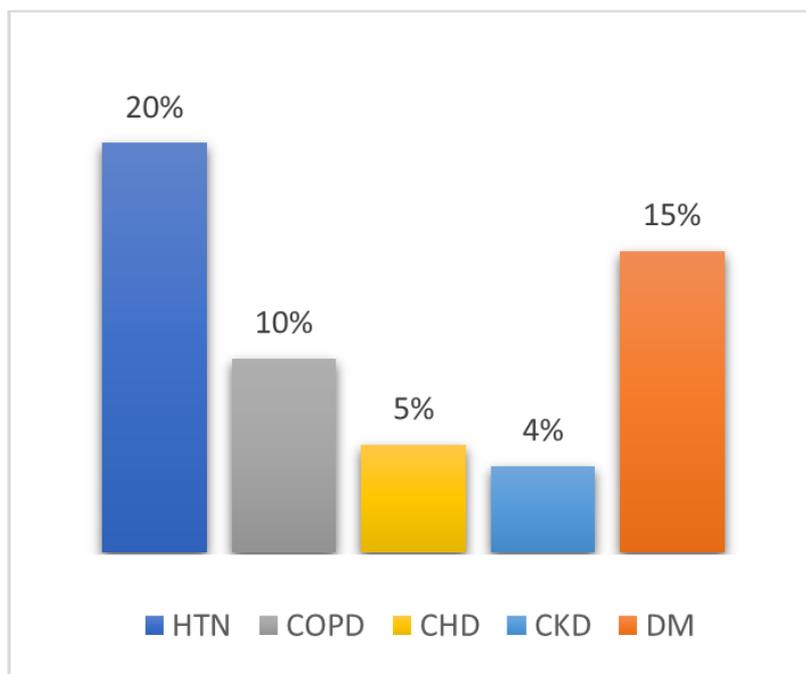


Figure 1: Gender distribution of participants (N=93)

Table 1: Age distribution of participants (N=93)

Age (Year)	n	%
<20	11	12%
20-30	28	30%
31-40	24	26%
41-50	15	16%
51-60	9	10%
>60	6	6%

**Figure 2: Comorbidities distribution of participants (N=93)****Table 2: Symptom distribution of all the participants (4-12 weeks from RT-PCR negative report)**

Symptoms	n	%
General symptoms		
Fatigue	43	46%
Weakness	12	13%
Insomnia	5	5%
Dizziness	2	2%
Vision impairment	1	1%
Respiratory symptoms		
Cough	8	9%
Dyspnea	4	4%
Musculoskeletal symptoms		
Joint pain	9	10%
Muscle ache	7	8%
Cardiovascular symptoms		
Chest pain	3	3%
Gastro-intestinal symptoms		
Loss of appetite	8	9%
Neurological symptoms		
Headache	6	6%
Anosmia	5	5%

Table 3: Symptom distribution of all the participants (After 12 weeks from RT-PCR negative report)

Symptoms	n	%
General symptoms		
Fatigue	31	33%
Weakness	10	11%
Insomnia	3	3%
Dizziness	1	1%
Vision impairment	1	1%
Respiratory symptoms		
Cough	5	5%
Dyspnea	4	4%
Musculoskeletal symptoms		
Joint pain	3	3%
Muscle ache	4	4%
Cardiovascular symptoms		
Chest pain	1	1%
Gastro-intestinal symptoms		
Loss of appetite	5	5%
Neurological symptoms		
Headache	3	3%
Anosmia	2	2%

Table 4: Presence of symptoms among participants during follow-ups (N=93)

Symptoms	At 4-12 weeks		After 12 weeks	
	n	%	n	%
Present	24	26%	15	16%
Absent	69	74%	78	84%

4. DISCUSSION

The aim of this study was to assess the pattern of post-Covid symptoms among Covid 19 patients. In our study, among total 93 participants, 61% were male whereas the rest 39% were female. So male participants were dominating in number and the male-female ratio was 1.6:1. The highest number of patients was from 20-30 years' age groups which was 30%. Besides this, 26% and 16% were from 31-40 and 41-50 years' age groups respectively which was noticeable. Many of these findings matched that of China [12] (Median age: 47 years; 41.9% female), India [13] (Mean age 40.3 years, 66.7% male) and other reports from Bangladesh [14] (43% were in the age range of 21 to 40 years, female: male ratio 1:2.33). But in some studies, conducted in America [15] (Median age, 63 years) as well as Europe [16] (Median age, 67.5 years) found higher age of patients but same male preponderance. In this study, during the first follow-up, 26% and during second follow-up, 16% patients were found with one or more comorbidities. These findings are slightly higher than that reported by a study conducted in the UK [17] which reported the prevalence of PACS and LCS as 20% and 10% respectively. The frequencies of several symptoms we found were some higher than that of some studies conducted in Bangladesh [18, 19]. During the first follow-up (At 4-12 weeks as post-Covid 19) of this current study as general symptoms, fatigue and weakness were found as 2 most frequent which were among 46% and 13% patients respectively. Besides

these, cough, joint pain, muscle ache and loss of appetite were found in 9%, 10%, 8%, and another 9% patients which were noticeable. On the other hand, during the second follow-up (After 12 weeks as post-Covid 19) as general symptoms, fatigue and weakness were found as 2 most frequent which were among 33% and 11% patients respectively. Those findings are consistent with the study that has reported similar symptoms [20]. In a study [21], after 3 to 9 months period, 14% of individuals had fatigue problems. Some studies reported breathlessness [22] as the second most common LCS (Long Covid 19 symptoms) with other studies citing anosmia, cough and myalgia to also be very common. [23] Augustin *et al.*, [24], reported a study found that, non- hospitalized Covid patients had more anosmia (12.4%) as well as ageusia (11.1%) than fatigue (9.7%) as well as shortness of breath (8.6%) over a four-to-seven-month recovery period.

Limitation of the Study

This was a single centered study with a small sized sample. So, findings of this study may not reflect the exact scenario of the whole country.

5. CONCLUSION & RECOMMENDATION

As per the findings of this current study, we can conclude that, fatigue; cough, joint pain, muscle ache and loss of appetite may be considered as the most common post-Covid symptoms for Covid 19 patients. Usually, one out of four patients may suffer from one or more post-Covid symptoms during 4 to 12 weeks after

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