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Original Research

Epidemiological Profile and Post COVID 19 Syndrome Among Recovered Patients of a COVID Care Centre of Jharkhand, India

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ABSTRACT:
Introduction:COVID 19 leads to persistent symptoms and complications in many patients post recovery.The present study reports findings on demographic profile, clinical presentations and post COVID syndrome of confirmed asymptomatic and mild symptomatic COVID-19 patients admitted in a COVID care centre of Hazaribag, Jharkhand.
Materials and Methods: In this retrospective cross-sectional study, we included confirmed COVID-19 patients, who were admitted in a covid care centre of Hazaribag district ofJharkhand.Data were collected from patients or their attendants through telephone interview by a structured questionnaire, after having appropriate consent.
Results:357 patients were admitted out of which 83% were male and 53% were of 20-39 years age group. The mean hospital stay was 8 days.193 patients could be reached over phone in which 3 patients reported post covid syndrome.
Conclusion: Majority of the patients with COVID-19 infection presenting to our hospital were young and asymptomatic. Although the number of persons with post covid syndrome was less, it should be taken care and properly dealt with.
Keywords: COVID-19, Post COVID syndrome, India.

INTRODUCTION

Coronavirus disease 2019 (COVID-19), has spread rapidly around the world since emerging in Wuhan, China, in late 2019 and it was later declared an international public healthemergency by the World Health Organization (WHO) [1].India also witnessed large number of cases since January 2020.The COVID related morbidity and mortality increased steadily due to local transmission and foci of community transmission.[2]More than 1.3 billion Indian population are at risk of SARS-CoV-2 infection in India, leading to various large-scale containment strategies at the national, state, and local levels. [3]

The key factors in COVID-19 pathogenesis seem that both abnormal immune responses and injury to immune cells leading to increase in the production of inflammatory cytokines, autoantibodies and complement proteins results in tissue damage.[4]When the COVID-19 pandemic began, initial descriptions of the symptomology focused on the clinical presentations of patients in the acute, inpatient setting.With passage of time, severaldata have emerged that many patients continue to experience symptoms related to COVID-19 after the acute phase of infection. There is currently no clearly delineated consensus definition for the condition: terminology has included “long COVID,” “post-COVID syndrome” and “post-acute COVID-19 syndrome.”Preliminary reports indicate some patients may develop a so-called “post-acute COVID-19 syndrome,” in which they experience persistent symptoms after recovering from their initial illness. The syndrome appears to affect those with mild as well as moderate-to-severe disease. The incidence, natural history and etiology of these symptoms are currently unknown. [5,6]After recovery, patients remain at risk for lung disease, heart disease, frailty, and mental health disorders. There may also be long-term sequelae of adverse events that develop in the

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course of COVID-19 and its treatment.[7] For patients diagnosed with COVID-19, surviving the disease may be just the first battle among many on the long road to recovery. Although there is not yet enough data to definitively establish and characterize a post-COVID-19 syndrome, potential long-term consequences can be inferred from emerging data as well as prior experiences with other serious respiratory illnesses and the broader post-intensive care syndrome (PICS), a constellation of physical, cognitive, and psychological disabilities that can develop in those surviving critical illness.[8.9]

There was total 349,694 covid-19 cases and 5142 death in Jharkhand as on 23/12/2021. [10]

Since it is a new disease, we have limited information regarding its features and post recovery sequel. The research question was framedto find the residual symptoms or any other newer symptom post recovery from COVID 19 in mild as well as asymptomatic cases.

Objectives:

1. To assess persistent symptoms in patients discharged from hospitalization for COVID-19.
2. To assess the characteristics of patients admitted in COVID care centre of Hazaribag.

MATERIALS AND METHODS

Study design, study setting and sample size: The present study was a facility basedRetrospectiveCross-sectional study conducted atForest training institute(FTI),Hazaribag. Hazaribag is situated in the northeast part of North Chotanagpur Division of Jharkhand state with a total area of 4313 square kilometre and 1,734,495 total population.Forest training institute (FTI), Hazaribag wasone of the designated COVID care centre with availability of 62 beds for asymptomatic and mild symptomatic COVID-19 positive cases of Hazaribag District. The study duration was from July 2020 to October 2020. In this period total 357 patientswere admitted in FTI COVID Care Centre. These patients were our study population.

Method of data collection: Patient's details were studied for their demographic characteristics. Demographic details and treatment details of patients were obtained from their hospital records. All the COVID positive but either asymptomatic or mild symptomatic patients of Hazaribag urban area were admitted in FTI COVID care centre. While moderate to severely ill patients were admitted in Sheikh Bhikhari Medical College hospital,Hazaribag (SBMCH). We contacted all the patients above 35 years of age telephonically after at least one month of their discharge from FTI. We enquired them about any existing health related problems at present or in past after their discharge from the FTI.

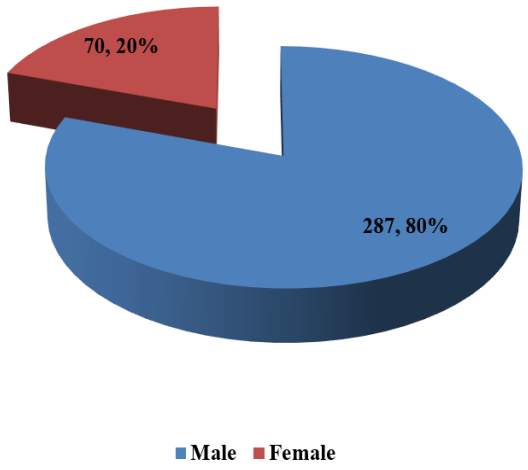
Treatment given to each patient was as per government protocol and ICMR guidelines. It consisted of tablet hydroxychloroquin, tablet azithromycin, tablet vitamin C, and tablet zinc.

Hydroxychloroquin was given 400 mg twice on first day and 200 mg twice daily after day one to complete 5 days course. Azithromycin was given 500 mg once daily for five days.All patients received symptomatic treatment.If health condition of any patient deteriorated, we referred them to SBMCH.

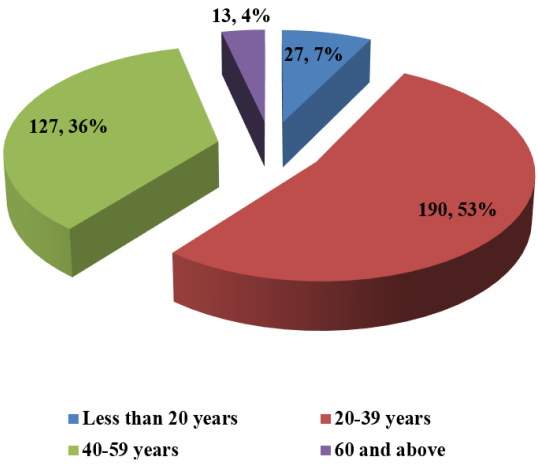
The discharge policy of admitted patients was as according to ICMR and state health department guidelines. The patients were discharged when the repeated nasal swab sample became negative for COVID 19 virus. The testing of nasopharyngeal samples was done either by truenat or RT-PCR test. RT-PCR is the gold standard for covid 19 testing.

Statistical analysis

Statistical analysis was performed by using statistical software R. The descriptive analysis was done to obtain frequency table and percentage. Ethical clearance was obtained from Institute Ethical Committee.Informed verbal consent was taken from all the participants before their telephonic interview.



Graph 1: Genderwise distribution of subjects



Graph 2: Agewise distribution of subjects

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Table 1: Clinico- Demographic details of study participants (n=357)

Variables		Frequency	Percentage
Mean age of patients(in years)	36.6		
Days of stay at COVID care centre	**Less than 10 days**	256	71.7
	10-14 days	95	26.6
	More than 15 days	6	1.7
Mean hospital stay(in days)	8		
No of patients referred		16	4.5
Admission in each month of year 2020	**July**	95	26.6
	August	159	44.5
	September	96	26.9
	October	7	2.0

Table 2: Details of patients with post COVID symptoms

Variables		Frequency	Percentage
No of patients telephonically interviewed for post covid symptoms		193	54.06
No of patients with post covid syndrome		03	1.56
Post covid symptoms	**Persistent breathing difficulty**	02	1.03
	Tiredness	01	0.53

RESULTS

The records of 357 patients shown that 287 (80.4%) were male while 70 (19.6%) were female. Most of the persons (53.2%) belonged to 20-39 years age group. The mean age was 36.6 years. Most of the patients (71.7%) discharged within 10 days of their admission while 101 (28.3%) patients were stayed more than 10 days at health facility. The average no of days ofstay was 8 days.Most of the patients were admitted in the month of August followed by September and July.Sixteen patients were referred to hospital/ higher centres for their worsening symptoms for better treatment.(Graph1, 2, Table 1)

We telephonically contacted 193 individuals and enquired about their health condition. No mortality was reported while three persons reported with post COVID syndrome. Two persons reported persistent breathing difficulty while one person told about feeling of tiredness.(Table 2)

DISCUSSION

With this study we tried to find the residual symptoms or any other newer symptom post recovery from COVID 19 in asymptomatic as well as mild symptomatic cases. This will be helpful in better understanding of this disease.Most of the patients were admitted in the month of August. With the decreasing case load of COVID 19 cases in hazaribag the FTI centre was finally closed in the month of November 2020.

Around 80% of admitted patients were male and around 89% patients belonged to 20-59 years age group. A study from AIIMS New Delhi also reported higher COVID 19 cases among male in comparison to females with a mean age of 40.1 years.[11] Reported cases have been concentrated in younger cohorts. This may be due to more outdoor activities by these groups of people which increase the risk of their covid infection.

As per ICMR and state health department guideline every patientwere tested for COVID I9 after 7 days of their first COVID positive test and thereafter every three days until the patient not became negative for COVID 19. Total 101 (28.3%) patients stayed more than 10 days at health facility. This was due to their positive report of covid 19 test which was generally done after 7 days of their first positive covid test.Total 16 patients were referred to higher centre during the course of their treatment. The reasons for their referral were either due to worsen health condition or their advanced age with more risk to their health. No mortality was reported post recovery from COVID care centre.Three patients reported with some degree of residual symptoms even after more than one month of their discharge from the COVID care centre. Two persons reported persistent breathing difficulty while one person told about feeling of tiredness.A study from France by Carvalho-Schneider C among 150 mild to moderately ill patients showed that two-thirds ofpatients reported symptoms at day 30 and day 60 from their symptoms onset, and more than one third feltill or in a worse clinical condition at day 60 than atonset of COVID-19. [12]

The lower prevalence of post covid syndrome in our study may be because we have studied asymptomatic or mid symptomatic patients. Majority of patients were asymptomatic at the time of admission in our study. The prevalence might increase if we have taken moderate to severely ill patients. We have not included moderate to severely ill patients, this may be considered as limitation of this study.

CONCLUSION

Majority of the patients with COVID-19 infection presenting to our hospital were young and asymptomatic. The post covid syndrome badly impacts quality of life of a person. So, it should be taken care and properly dealt with.

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