



Research Article

CLINICAL SPECTRUM OF COVID-19 IN INDIAN SCENARIO

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ABSTRACT

COVID19 is a newly recovered corona virus that causing respiratory tract infection. Now it is a pandemic disease and causing deaths of millions of people over the world. It is a droplet infection and rapidly spread from human to human. Most of the corona virus causing mild to moderate respiratory illness and recover without requiring special treatment. Materials and Methods: The study was conducted in a tertiary centre for COVID-19, at Kolkata in West Bengal, India. According to severity of these patients were categorized into four groups:

Acute severe respiratory illness (SARI): Fever associated with cough, sore throat, lethargy and shortness of breath.

Moderate symptomatic: fever, cough, throat pain, diarrhea, generalize body ache, fatigue.

Mild symptom: no fever but mild dry cough, sneezing malaise, hyposmia.

Asymptomatic: apparently normal but history of contact with COVID-19.

Result: Out of 100 COVID19 patients, 14 patients were severe group and 8 patients required respiratory support.

Conclusion: 86% of COVID19 was spontaneously recovered and mortality rate is 6% in Indian scenario. Patients with co-morbidity are more complicated.

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INTRODUCTION

A pneumonia of unknown cause detected in Wuhan, China was first reported to the WHO Country Office in China on 31 December 2019. The World Health Organization declared the outbreak to be a Public Health Emergency of International Concern on 30 January 2020, and recognised it as a pandemic on 11 March 2020. Total number of Confirmed cases are 32,67184 and confirmed deaths are 2,40000 as on 2nd May 2020, (1). Total number of confirmed cases in India is 37,776 and total deaths is 1,223 as on 2nd may, 2020(2). Corona virus disease (COVID-19) is an infectious disease caused by a newly discovered corona virus. Most people infected with the COVID-19 virus will experience mild to moderate respiratory illness and recover without requiring special treatment(3). Elderly and those having cardiovascular disease, diabetes, hypertension, chronic respiratory disease, chronic kidney disease, chronic liver disease and cancer are most likely to develop serious illness. The COVID-19 virus spreads primarily through droplets of saliva or discharge from the nose when an infected person coughs sneezes and speaks. Using available preliminary data, the median time from onset to clinical recovery for mild cases is approximately 2 weeks and is 3-6 weeks for patients with severe or critical disease(4).

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The Coronavirus Study Group of the International Committee on Taxonomy of Viruses has proposed that this virus be designated severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (5).When the COVID-19 confined to the conducting airways, it causes mild form of disease but when COVID-19 has progressed to the gas exchange units of the lung, it causes severe form of disease known as ARDS. Elderly individuals are particularly at risk because of their diminished immune response and reduced ability to repair the damaged epithelium. And also reduced mucociliary clearance, which allow the virus to spread to the gas exchange units of the lung more readily (6).The virus enter into cell through the receptor, the angiotensin-converting enzyme-2(ACE-2), causing inflammation at alveoli-capillary membrane and impaired gas exchange function of lung.

MATERIAL AND METHODS

Objective: to know the clinical spectrum of covid-19 in Indian scenario.

Design

Observational study.

Place and Duration of Study

I.D & B.G Hospital, Kolkata, India. Now,it is a COVID designated level-4 Hospital.  
Study period was from 10<sup>th</sup> March, 2020 to 3rd May 2020.

## PATIENTS AND METHODS

All the COVID19 positive patients were included in this study. Covid19 were diagnosed by “Real-Time Reverse Transcription Polymerase Chain Reaction” (RT-PCR) from ICMR, KOLKATA. Nasopharyngeal and oropharyngeal swab were collected and were placed into a collection tube containing virus transport medium (VTM) for extraction of total RNA. Method of collection of sample was followed the guideline of ICMR. Study population had definite history of contact with COVID19 patient irrespective of their sign and symptoms. And those who were Covid19 positive were included in this study. Eight patients were transferred to another hospital as they required ventilatory support. One patient died here. After few randomized COVID19 test it was observed that the COVID19 were negative after 7 to 9 days. So, it was protocolised that 1<sup>st</sup> sample to be collected after 7 day of initial positive test. If 2<sup>nd</sup> sample was negative 3<sup>rd</sup> sample was collected after a gap of 24 hour to 48 hour of 2<sup>nd</sup> sample. If two consecutive sample were negative, discharge the patient if no others symptoms. If 2<sup>nd</sup> sample was positive, 3<sup>rd</sup> sample were sent after 3 to 5 days and wait for two negatives consecutive sample. Others routine investigations like CBC, RFT, LFT, Electrolyte, CXR, ABG, ECG were done. Routine clinical examination like GCS, Pulse, BP, Respiratory rate, Single breathe count(SBC), pulse oximetry, Urine output were observed every day. Symptomatic patient with comorbidity were treated with HCQS( 800mg ) loading dose followed by( 400mg) per day for 5 day along with Azithromycin (500mg) per day. Asymptomatic patient were treated with Vitamins- B-complexes with vitamin- C or antioxidant.

*According to severity of these patients were categorized into four groups*

- Acute severe respiratory illness (SARI): Fever associated with cough, sore throat and shortness of breath.
- Moderate symptomatic: fever, cough, throat pain, diarrhea, generalize body ache, fatigue.
- Mild symptom: no fever but mild dry cough, sneezing malaise, hyposmia.
- Asymptomatic: apparently normal but history of contact with COVID-19.

**Result and Analysis:** Out of 100 patients, 8 patients were shifted to another setup as they required respiratory support which was not available in I. D. & B. G Hospital during this study. Out 100 patients 20 were asymptomatic, 22 patient were mild symptomatic, 50 patients were moderate symptomatic. Out of these 50 patients 6 were developed dyspnea during hospital course. So, total number of severe case was 14. We followed up the transferred case and got 5 patients were dead. One patient was dead in I.D. & B. G. Hospital.

**Table**

1.Asymptomatic	No symptom but history of contact	20	20%
2.Mild symptoms	No fever but mild dry cough, sneezing malaise, hyposmia	22	22%
3.Moderatesyptoms	Fever, cough, throat pain, diarrhea, generalize body ache, Weakness	50	50%
4.Severe symptoms	1.Fever associated with cough, sore throat and shortness of breath.	8	8%

Out of 50 moderate categories patients, 6 patients developed severe respiratory distress during hospital course. Out of 100 patients 65 were male and 35 were female. 32 patients were above 50 year or 50 year. Eight patient had anosmia or hyposmia.

## DISCUSSION

Covid19 generally follows a benign course in healthy subject. However, the complication rate is observed to be higher in elderly, immune-compromised, and Co-morbidity like cardiovascular disease, diabetes, hypertension, chronic respiratory disease, chronic kidney disease, chronic liver disease and cancer. The clinical spectrum of SARS-CoV-2 infection appears to be wide, encompassing asymptomatic infection, mild upper respiratory tract illness, and severe viral pneumonia with respiratory failure and even death (7). In this study, we got similar clinical presentation. D-dimer, lactate dehydrogenase, myocardial enzymes, interleukin-6 (IL-6), serum ferritin, procalcitonin, HRCT thorax which are related to sever COVID19, were not done due to limitation of our resource. It is one of the limitations of this study. Impairment of gas exchange function of lung is due to local inflammation of “Alveoli-capillary membrane” either by directly due to virus itself or indirectly by inflammatory mediator.

The median recovery time is observed in moderate COVID19 is approximately 2 week but in severe COVID19, it is 3 week to 6 week. One Chinese study which is published in “The NEW ENGLAND OF JOURNAL OF MEDICINE” found the severity of COVID19 is 15.7 %( 8). In this study we got 14% of patient are very severe and required respiratory support. In a large cohort of patients with Covid-19, 81% had mild disease, 14% had severe disease, and 5% became critically ill with organ failure; the mortality in the critically ill group was 49%(9). Compare to above study, In this study we got 86% patients are asymptomatic to moderate disease, 14% patients were severe COVID19. And out of these 14% patients, 8% required respiratory support.

Three patients were children and their presentation were cough and fever and history of contact with COVID19 positive case. Lowest age of this study was 9month and it is observed that children were less severe and early recovery from COVID19. Twenty patients had co-morbidity and they developed SOB and 6 patients were transfer to another setup as they required ventilator support. Anosmia was another complaint and found 8% of corona positive case.

**Conclusion:** 14% COVID19 patients are severe and mortality rate is 6% in Indian scenario. Most of the patients were mild to moderate disease and spontaneously recovered. Patients with co-morbidity are more complicated.

## Declaration of interests

We declare no competing interests.

## Acknowledgments

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