

# Clinical Characteristics and Outcome of Patients with Symptomatic Corona Virus Disease 2019 in Small District of Himachal Pradesh in India

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## Abstract

**Background:** In India Covid 19 cases started rising after the Lockdown and from January 30 to August 02 there have been 18,07,222 confirmed cases of Covid 19 with 38176 deaths. Now Covid 19 cases are present in small towns and villages as people from major cities has been migrates to their native places. This study describes the demographic, baseline comorbidity, presenting clinical complaints and outcome of the first sequentially patients with COVID -19 in a small district from Himachal Pradesh, In India. **Subjects and Methods:** This retrospective observational study was conducted in Dr. Radha Krishnan Government medical college, Hamirpur, Himachal Pradesh, India. The inclusion criteria for the study was All symptomatic patients with laboratory-confirmed COVID-19 by Real time polymerase chain reaction (RT-PCR) in Distt. Hamirpur in Himachal Pradesh from March 2020 to 31 July 2020. Oral consent was obtained for the study. The medical records of patients were analysed by the research team of the department of medicine, Dr. Radha Krishnan Government Medical College Hamirpur. **Results:** Maximum number of patients (92%) migrated from outside the state and majority from the cities of high number of Covid cases. During hospital periods 36% patients had peripheral capillary spo2 less than 95% and required oxygen support. 2(4%) patients died in the hospital and 5(10%) was referred to higher centre. 43(86%) patents recovered and discharged in stable condition. Fever (64%) was the most common symptom followed by cough (60%), fatigue (40), rhinorrhoea (28%), headache (26%) and hypogeusia (16%). **Conclusion :** The clinical presentation was milder and complications were seen in very few. Special attention is required to the geriatric population and with severe comorbid condition, as they are more likely to have a poor outcome.

**Keywords:** Corona Virus, COVID 19

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## Introduction

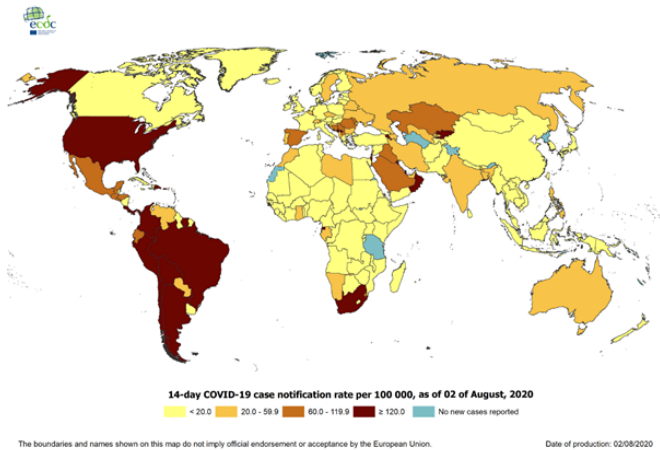
Rapid outbreak of corona virus disease 2019 (COVID 19) started since November, which arises from severe acute respiratory syndrome corona virus 2(SARS -CoV-2) Infection, has now become a public health emergency of international concern. There have been 17,660,523 confirmed cases of Covid 19 and including 680,894 deaths reported to WHO till 02 august 2020.<sup>[1]</sup>[Figure 1].

In India Covid 19 cases started rising after the Lockdown and from January 30 to August 02 there have been 18,07,222 confirmed cases of Covid 19 with 38176 deaths.<sup>[2]</sup> Now Covid 19 cases are present in small towns and villages as people from

major cities has been migrates to their native places.

Limited information has been available to describe the presenting characteristics and outcome of Indian patients requiring hospitalization with this illness. In a cohort study from china, hospitalized patients were predominantly men with median age of 56 years, 26%required intensive care units care, with 28% mortality rate.<sup>[3]</sup> However, there are significant difference between China and Indian population demographics, smoking rates and prevalence of comorbidities.

This study describes the demographic, baseline comorbidity, presenting clinical complaints and outcome of the first sequentially patients with COVID -19 in a small district from



**Figure 1: Geographical distribution of Covid 19 cases worldwide.**

Himachal Pradesh, In India.

## Subjects and Methods

This retrospective observational study was conducted in Dr. Radha Krishnan Government medical college, Hamirpur, Himachal Pradesh, India.

The inclusion criteria for the study was All symptomatic patients with laboratory-confirmed COVID-19 by Real time polymerase chain reaction (RT-PCR) in Distt. Hamirpur in Himachal Pradesh from March 2020 to 31 July 2020. Oral consent was obtained for the study.

## Data Collection

The medical records of patients were analysed by the research team of the department of medicine, Dr. Radha Krishnan Government Medical College Hamirpur. Epidemiological, clinical and radiological characteristics and treatment and outcomes data were obtained with data collection forms from medical records. All the data reviewed by internal medicine specialist.

## Results

Total 50 symptomatic patients confirmed by RT- of COVID 19 were included in the study, of whom 37 (74%) were male. Fever (64%) was the most common symptom followed by cough (60%), fatigue (40), rhinorrhoea (28%), headache (26%) and hypogeusia (16%) [Table 1,2].

Maximum number of patients (92%) migrated from outside the state and majority from the cities of high number of Covid cases. During hospital periods 36% patients had peripheral

**Table 1: Distribution of comorbidity in symptomatic Covid 19 patients (n= 50)**

Variables	N (%)
Diabetes	22 (44%)
Hypertension	21(42%)
Cardiovascular Disease	11(22%)
COPD	10(20%)
Hypothyroidism	04 (08%)
Chronic Kidney disease	02 (04%)



**Figure 2: Bilateral lower lobe pneumonia in Covid 19 symptomatic patient**

capillary SpO<sub>2</sub> less than 95% and required oxygen support and 12% had bilateral lower lobe pneumonia on chest X-ray [Figure 2 & 3] In 8% of patients mean blood pressure was less then 70mmhg and they required ionotropic support. 2 (4%) patients died in the hospital and 5 (10%) was referred to higher centre. 43 (86%) patents recovered and discharged in stable condition.

## Comorbidities

Twenty-two patients (44%) were diabetic, 42% were hypertensive, 22% were suffering from cardiovascular disease, and COPD, Hypothyroidism, and chronic kidney disease was present in 10%, 08%, and 04% respectively. [Table 2]

## Discussion

This study represents the small case series of sequentially hospitalized patient with confirmed Covid -19 in India in a



**Figure 3: Left lower lobe pneumonia in symptomatic Covid 19 patients**

small district in Himachal Pradesh. This study shows that in small district like Hamirpur in Himachal Pradesh maximum cases are migrated from outside the state where Covid 19 patients are very high. Men and those with pre-existing hypertension and /or diabetes were highly prevalent in this case series and the pattern was similar to data reported from china and U.S. and studies from India. [3-5] However mortality rates in study is lower with good recovery rate in symptomatic Covid 19 patients. Symptomatic patients with comorbidity had a worse outcome, so did the elderly population. Despite having similar presentation, patients aged more than 60 years and with comorbidity had to face a more severe disease course and increased mortality. Though the overall occurrence of complications and mortality was less in our study, the proportion was significantly high in the geriatric population. Chest Xray suffices to aid us in our management but the extent of abnormalities does not always correlate with the clinical presentation as finding varied from normal chest Xray to bilateral involvement irrespective of symptoms.

### Limitations of Study

This study has some limitations like first; small sample size, second: blood investigations was not done fully like D dimer, IL6 level and procalcitonin level for early initiation of steroids and Tocilizumab, which may improve the monitoring of various complications like coagulopathy and may improve the outcome. third; non availability of Chest CT for early recognition of chest lesions.

**Table 2: Distribution of variable (clinical and biochemical) in symptomatic Covid 19 patients (n= 50)**

Variables	N (%)
Males	37 (74)
Respiratory rate more >22	10 (20)
Peripheral capillary spo2 <95%	18(36)
Pulse rate > 94/ min	36(72)
Mean blood pressure <70	04(8)
Renal involvement (oliguria/ serum creatinine >1.1	05(10)
Fever > 101 <sup>0</sup> f	32(64)
Smoker	24(48)
Cough	30(60)
Sputum	15(30)
Fatigue	20(40)
Rhinorrhoea	14(28)
Headache	13(26)
Hypogeusia	08(16)
Dyspnoea	10(20)
Haemoptysis	03(06)
Pleuritic chest pain	06(12)
B/L Chest X ray opacities	06(12)
Myalgias	36(72)
Hypertensive with controlled blood pressure <120/80 mmhg	09(18)
Hypertensive with uncontrolled blood pressure>120/80mmhg	12(24)
Diabetic with controlled blood sugar RBS <180mg/dl	04(08)
Diabetic with uncontrolled blood sugar RBS >180mg/dl	18(36)
Oxygen support required	18(36)
Death	02(04)
Delirium	06(12)
On insulin	07(14)
On oral hypoglycaemic drugs	14(28)
On anti-hypertensive drugs	21(42)
On ionotropic support	04(08)
History of travelling from out side	46 (92)
Referred	05 (10)
Deaths	02(04)
Recovered	43(86)

### Conclusion

The study showed variable presentation of symptoms in covid 19 patients, fever as most common symptom to haemoptysis

in some patients. How ever severity of disease depends upon the age and comorbid condition. The clinical presentation was milder and complications were seen in very few. Special attention is required to the geriatric population and with severe comorbid condition, as they are more likely to have a poor outcome.

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