



## CLINICAL PROFILE AND OUTCOME OF COVID-19 SUSPECTS ADMITTED IN THE ISOLATION WARD AT DR. RADHAKRISHNAN GOVT. MEDICAL COLLEGE AND HOSPITAL HAMIRPUR HIMACHAL PRADESH.

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### ABSTRACT

**Background:** The Covid-19 pandemic is an ongoing pandemic caused by Corona Virus. After its origin from Wuhan city of China it progressed to involve whole of the world. Most common symptoms are cough, fever, shortness of breath, affecting large proportion of population. Although overall mortality rate is less but mortality rate is high among patients with co-morbidities. Modes of spread of the disease are by droplets and contaminated surfaces. As it progressed various step have been taken by the government to break the chain of transmission. Among these are various lockdowns ,establishment of quarantine centres and Covid dedicated wards in hospitals for COVID -19 suspects as well as confirmed cases

**Method:** It was prospective study done on patients with symptoms suggestive of COVID-19 admitted in isolation ward at Dr. RadhaKrishnan Govt. Medical College and hospital Hamirpur H.P. These patients were called as suspects according to the guidelines issued by ICMR. These patients were investigated for Corona virus disease, their clinical profile, history of travel or contact with a confirmed case and outcome was studied.

**Results:** Total 65 patients were admitted with symptoms suggestive of COVID-19 and nine patients were found positive for Corona Virus. All these patients were highly suspicious of Covid infection and were in quarantine centres.

**Conclusion:** As Corona Virus Disease spreads by droplet infections suspecting patients and isolating them till the result can break the transmission of disease and prevent community transmission.

**KEYWORDS :** corona virus, cough, isolation, quarantine.

### INTRODUCTION

The COVID -19 pandemic is an ongoing global pandemic caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2)<sup>1</sup>. Few cases of viral pneumonia of unknown origin were noticed in Wuhan city of China in December 2019. World Health Organisation (WHO) was informed about this outbreak on 31 December 2019. This outbreak was called a Public Health Emergency of International Concern on 30<sup>th</sup> January and subsequently declared a pandemic on 11 March 2020.

India is also a part of pandemic with first case reported in Kerala on dated 30 January 2020 whose origin was from China. Since then it spread to involve whole of the country and figure of 1000000 was crossed on 17 July 2020. There was sharp increase in the cases now with number crossed 20,00000 on dated 6 August 2020.

The virus mainly spread via small droplets produced by coughing ,sneezing and talking.. Less commonly people may get infected by touching a contaminated surface and then touching their face, but the virus has also been found in stool and blood which has raised questions about other potential routes.<sup>2</sup> Moreover, aerosol and fomite transmission of SARS-Co-V-2 has been shown to be plausible<sup>3</sup>. It is most contagious during the first three days after the onset of symptoms and it can spread even before the onset of symptoms and even from people who do not show symptoms. The human to human transmission led to numerous instances of clustering of cases ,a typical example of which is outbreak on the Diamond Princess cruise ship.<sup>4</sup>

Median incubation period is estimated to be 5.1 days.<sup>5</sup> Common symptoms are fever ,cough ,fatigue, shortness of breath and loss of sense of smell. Severe cases can have pneumonia and acute respiratory distress syndrome. Treatment is mainly symptomatic.

To prevent the spread of disease outbreak Epidemic Disease Act 1897 has been evoked, leading to the temporary closure of educational and commercial establishments. All tourist visas have been suspended, as a majority of the confirmed cases were mainly imports. On 14 March, the union government declared the pandemic as a "notified disaster" under the Disaster Management Act, 2005, enabling states to spend a larger part of funds from the State Disaster Response Fund to fight the virus.

Slowly, the pandemic spread to various states and union territories including the state of Himachal Pradesh. The first case was recorded in Himachal Pradesh on 20 March 2020. As on 9 August total number of cases is 3264, 14 deaths and 2081 cures. Various steps has been taken by the govt of Himachal Pradesh to prevent spread of infection. As the spread of virus is by droplets and close contacts. All those coming to state are checked at the entry points. and depending upon the risk of infection they are kept under observation either in govt. notified institutes or at home.

Isolation ward have been set up in hospitals to prevent mixing of these suspects with general population. All those suspects with symptoms are admitted and tested for COVID 19. we have conducted a study of clinical profile of various suspects coming to isolation ward of the hospital and their outcome.

Objective of the study is to observe the clinical profile of COVID-19 patients so that they can be suspected early depending upon symptoms and can be kept under observation in isolation till their result for COVID-19.

### MATERIAL AND METHODS:

This was a prospective study done at Dr. Radha Krishnan Govt. Medical College and Hospital Hamirpur (H.P.). All those patients admitted in the isolation ward from March 2020 to July 2020 and suspected of having COVID-19 infection were included in the study. Their complete history ,clinical features ,history of travel or contact with a confirmed case and outcome was evaluated . Approval from the ethical committee of the college was taken. Real Time PCR for Corona virus confirmation was done.

### RESULTS.

This was a prospective study done at Dr. RKGMC and hospital Hamirpur. As per guidelines issued by the govt of Himachal Pradesh flu clinic and isolation ward have been set in various hospitals. Flu clinic is for screening of patients with flu like symptoms and patients are screened for various risk factors and patients suspected of having covid infection are admitted in isolation ward and investigated.

Study involved total 65 patients admitted with suspected COVID -19

infection up to 31 July 2020 with 45 males and 20 females. Age of the patients was between 7 months to 80 years. Mean age of the patients was 43 years. Maximum number of patients were of the age group of 21 to 40 years (40%). Figure 1 shows distribution of patients according to age group.

Himachal Pradesh being a small state people go out of state for earning ,58% of our patients have returned from other states (Figure 2), Maximum number of suspected patients were from New Delhi. Two patients who came from other countries were also under observation.

Most common symptoms were generalised body aches, cough, fever and respiratory difficulty. Figure 3 shows percentage distribution of various symptoms. 17 % of patients were having Acute Respiratory Distress Syndrome. Co- morbidities like Diabetes Mellitus, Hypertension, COPD and immunocompromised state were present in 19% of patients. Maximum number of patients (59 %) were under observation either at home or in institutional quarantine centres. 63% of these patients were transported in Govt. ambulance 108 to hospital and back to home after investigations and treatment.

Real Time PCR of all these patients was done and 10 patients were found positive for COVID-19 confirmed patients were then shifted to Covid Care Centres and Dedicated Covid hospitals in Covid dedicated ambulances. Four of these 10 patients were died during the course of illness. Three patients were having comorbidities like Hypertension, Diabetes Mellitus and Kidney disease and one was without any comorbidity has returned from Delhi.

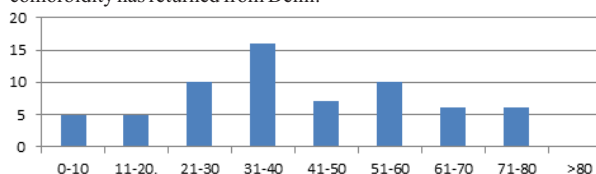


Figure 1: Age Distribution Of Patients

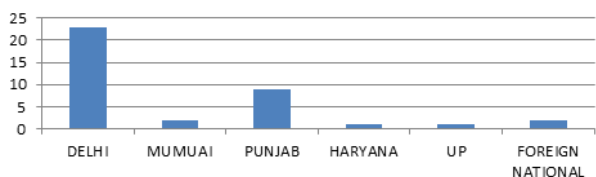


Figure 2: Travel History Of Patients

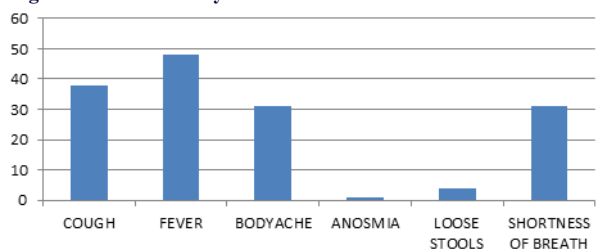


Figure 3: Symptoms Of Patients

**DISCUSSION:**

Covid 19 is a pandemic caused by Nobel Corona Virus. Its origin was from Wuhan city of China ,where it started in the form of pneumonia and involving whole of the world<sup>67</sup>. Virus is primarily spread between people in close proximity droplets produced by coughing and sneezing. Common symptoms are fever ,cough,fatigue, shortness of breath . complications are pneumonia and acute respiratory distress syndrome.As there is no specific treatment only symptomatic treatment and prevention can be done. Most people who contact COVID -19 recover, for those who do not, time between onset of symptoms and death is about 14 days.

Protective measures were first started in January with thermal screening of passengers from China but expanded to involve various countries toward end of February ,there were two patients in our study which were foreign returns showing symptoms of CIVID-19.

Recommended preventive measures are hand washing ,maintaining distance,covering mouth while coughing, bearing face mask and self isolation for people suspected of having infection. In our study 58%

people were in self isolation either at home or institutional quarantine.

Strategies in the control of an outbreak are screening, containment and mitigation. Screening is done to detect elevated body temperature associated with fever. Containment is under taken in the early stages of outbreak aims to trace and isolate these infected and also to introduce other measures to stop spread of disease. When it is no longer possible to contain the disease, efforts are then done to mitigate the disease. In our study 65% of patients were admitted after screening at flu clinic where temperature was measured. All were then isolated and admitted in the isolation ward to stop community transmission spread of the disease. All these patients were brought by COVID dedicated ambulances.

Initially lab tested samples of only persons with travel history to other countries or those with history of contact with a confirmed case. On 20 March 2020 ,the government decided to also include all pneumonia cases regardless of travel or contact after the country saw sharp increase in the number of cases. In our study we also included patients presented with pneumonia which was not explained by other causes.

On 9 April, ICMR further revised the testing strategy and allowed testing of the people showing symptoms for a week in the hotspot areas of the country, regardless of travel history or local contact to a patient. In our study we included those patients who were coming from hotspot areas. Maximum number of our patients were from Delhi which is a hotspot area.

Testing for community transmission began on 15 March. 65 laboratories of the Department of Health Research and the Indian Council of Medical Research (DHR-ICMR) have started testing random samples of people who exhibit flu-like symptoms and samples from patients without any travel history or contact with infected persons.. In our study also there were patients with no history of travel or contact with a confirmed case . 38 out of 65 patients were having fever.28 cough and 17 shortness of breath. 12 patients were having acute respiratory distress syndrome.

As of 18 March, no evidence of community transmission was found after results of 500 random samples tested negative.. Between 15 February and 2 April, 5,911 SARI (Severe Acute Respiratory Illnesses) patients were tested throughout the country of which, 104 tested positive (1.8%) in 20 states and union territories. About 40% of the identified patients did not have travel history or any history of contact with a positive patient. The ICMR advised to prioritise containment in the 36 districts of 15 states which had reported positive cases among SARI patients. In our study there were 12 patients were having SARI like symptoms.

The Government divided the entire nation into three zones – Green Zone, Red Zone, Orange Zone. Relaxations were allowed accordingly.

- Red zone (Hotspots) – districts with high doubling rate and high number of active cases
- Orange zone (Non-hotspots) – districts with fewer cases
- Green zone – districts without confirmed cases or without new cases in last 21 days

Delhi is being a red zone maximum number of our patients have returned from Delhi.

The Union Health Ministry's war room and policy making team in New Delhi consists of the ministry's Emergency Medical Response Unit, the Central Surveillance Unit (IDSP), the National Centre for Disease Control (NCDC) and experts from three government hospitals. They are part of policy decisions to decide how coronavirus should be tackled in the country. A cluster-containment strategy is mainly being adopted, similar to how India contained previous epidemics, as well as "breaking the chain of transmission".

To break the chain of transmission various quarantine centres are established. persons coming from hot zones are kept under surveillance in institutional quarantine and those coming from green and yellow zone are kept in home isolation. In our study 45 patients were in institutional quarantine and 12 patients were home quarantine. All suspect cases detected in the containment /buffer zones and those tested positive were hospitalised and kept in isolation in separate areas

in designated facilities. Three tier facilities has been developed for isolation of suspect and confirmed COVID-19 cases. pre-symptomatic /very mild /mild cases are kept in Covid Care Centres or they can be kept in home isolation .

**CONCLUSION:**

Covid-19 pandemic is a global pandemic with no proved treatment. Because of its mode of spread only hope for control is prevention of community transmission which can be done by isolating people with probability of infection or with confirmed disease. Although it was a small study done in a hilly medical college of Himachal Pradesh maximum number of our suspects were under observation. They were brought to hospital and back to home after treatment in Government ambulances. These steps for the containment of disease can help to prevent community transmission.

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**Conflict of interest:** None

**Ethical Approval:** Taken

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