

## Symptomatic and Asymptomatic Presentation of SARS-CoV-2 (COVID-19) Patients

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### INTRODUCTION

This case report narrates the clinical features of symptomatic and asymptomatic Covid-19 patients in India during the current pandemic by SARS-CoV-2. Diabetes increases the associated morbidity and mortality. Close monitoring is needed to improve patient treatment and prognosis. These case reports suggest that extensive community screening is required to prevent the spread of infection.

SARS-CoV-2, which causes a Severe Acute Respiratory Syndrome is a threat to public health worldwide.<sup>1</sup> The percentage of critically ill patients with co-morbidities like diabetes and cardiovascular diseases is high. It is essential to manage effectively to decrease the mortality rate.<sup>2</sup> In India, diabetes mellitus is a common health issue.<sup>3</sup> Recent information suggests that diabetes patients are at a higher risk of complications, including death.<sup>4</sup> Reports showed an overall fatality rate of 2.3 % in non-diabetes patients, but in patients with diabetes, it was increased up to 7.3 %. A better understanding of SARS CoV-2 aetiological association and the clinical impact on diabetes is needed to improve patient prognosis and treatment outcome.<sup>5</sup> By 20<sup>th</sup> May 2020, there were 4,789,205 confirmed cases of Covid-19, including more than 3,18,789 deaths, reported across 215 other countries (WHO).<sup>6</sup> In India among 96,169 reported cases 3,029 fatalities and 56,316 active cases were documented, 78 deaths were documented among 11,224 confirmed cases in Tamilnadu.<sup>7</sup>

### PRESENTATION OF CASES

#### Case 1

A 62-year-old female patient from Tondiarpet, Chennai. She had dyspnoea and fever for the past four days and was admitted on 18<sup>th</sup> May 2020. She had a history of diabetes for 7 years with irregular medications and follow-up. She was advised to take Tab. Metformin-1000 mg and Tab. Glipizide-10 mg daily. Her vital signs at the time of admission: Blood pressure - 130 / 92 mmHg; Pulse - 72 breaths per minute; Respiratory rate - 20 breaths per minute and temperature - 38 °C. Blood tests indicated a level of 160 mg / dL in Fasting Plasma Glucose (FPG), HbA1c > 8 mmol / L (Postprandial - 2 hrs.), C-Reactive Protein (CRP) > 6.00 mg / L, Leukocyte  $5.01 \times 10^9$  / L, Lymphocyte count  $1.38 \times 10^9$  / L, Neutrophil  $3.2 \times 10^9$  / L; Procalcitonin (PCT) > 0.10 ng / mL.

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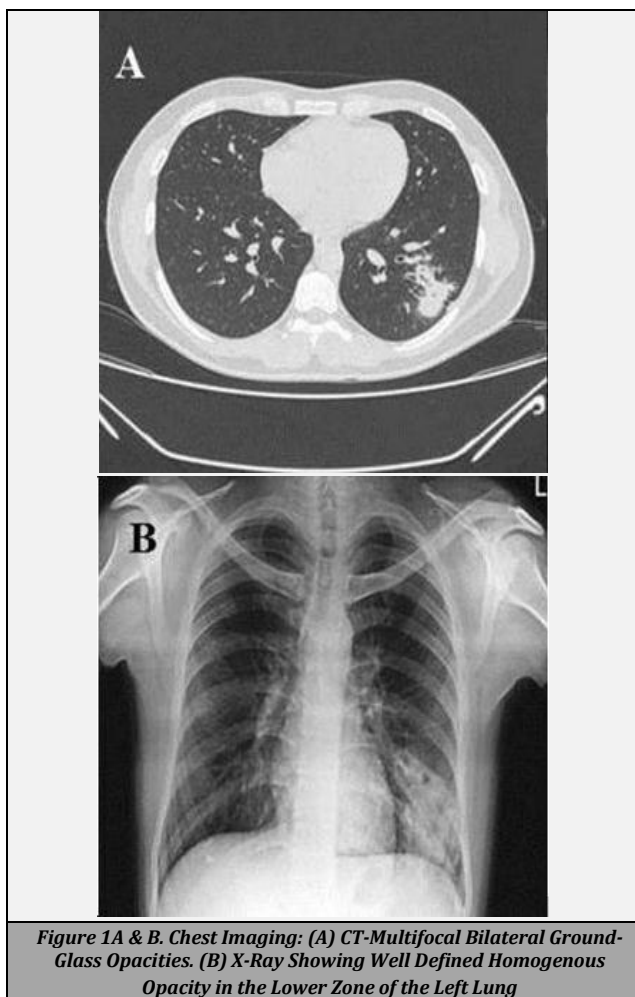
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Nasopharyngeal swab was taken. She was positive for SARS-CoV-2, and it was confirmed by RT-PCR (Real Time-Polymerase Chain Reaction). On the day of admission, High-Resolution Computed Tomography (HRCT) chest was taken, and it showed multiple ground-glass opacities in her left lung. (Figure 1-A). On 9<sup>th</sup> day of admission, the lesions progressed by involving both lungs with thickening of interlobular septa in the lower lobe of the left lung; additionally, small bilateral pleural effusions were noted (Figure 1-B). On the 20<sup>th</sup> day of admission, completely resolved pleural effusions and reduced bilateral pulmonary lesions were noted. After the 25<sup>th</sup> day of admission, the patient showed good progress except for mild shortness of breath. On 10<sup>th</sup> June 2020, 3<sup>rd</sup> CT examination was done, which showed partial absorption of lesions in both lungs.

The results of RT-PCR for Covid-19 detection on 12<sup>th</sup> and 14<sup>th</sup> June were negative. During her course in the hospital, insulin injection was prescribed to control her glucose level, ritonavir and multivitamin supplements were administered. Glucose level was under control during the hospital stay.



SARS-CoV-2 was negative by RT-PCR for the 2<sup>nd</sup> and 3<sup>rd</sup> sample. Complete Blood Count (CBC) and CT Chest were normal at the time of discharge. At the time of discharge, patient was advised to take multivitamin tablets, vitamin C, ranitidine, and zinc for ten days. She was instructed for a further 14 days of home quarantine.

### Case 2

On 25<sup>th</sup> May 2020, a 35-year-old female from the same family (daughter-in-law) was screened; she was taking care of the above-infected patient (case report 1). She was asymptomatic (no fever, cough and expectoration) and was diagnosed to have diabetes at the time of admission. She was admitted for SARS-CoV-2 screening in the hospital. Her test reports were as follows - CRP > 5.00 mg / L, Leukocyte  $6.7 \times 10^9$  / L, Lymphocyte count  $2.6 \times 10^9$  / L, Neutrophil  $4.0 \times 10^9$  / L, PCT->0.05 ng / mL.

RT-PCR for SARS-CoV-2 was positive, but HRCT chest was insignificant. The repeat CT on 5<sup>th</sup> and 9<sup>th</sup> day of admission showed no evidence of pneumonia. She did not have any of the following symptoms on her days of admission like fever, cough, myalgia, tiredness, headache, haemoptysis or diarrhoea, acute respiratory distress syndrome or secondary infection (asymptomatic). During her course in the hospital, oral multivitamin tablets and healthy supplements were the primary treatment. She got discharged on 12<sup>th</sup> June, 2020 after SARS-CoV-2 test was negative by RT-PCR.

### Case 3

A 24-year-old asymptomatic male was admitted to the hospital on 21<sup>st</sup> April 2020 for close contact with novel corona virus pneumonia patient (six days prior). The patient remained healthy at the time of admission and had no history of diabetes / smoking. His vital signs and physical examinations were normal.

His laboratory findings were: CRP > 5.00 mg / L, Leukocyte  $8.0 \times 10^9$  / L, Lymphocyte 36 %, Lymphocyte count  $3.6 \times 10^9$  / L, Neutrophil  $5.2 \times 10^9$  / L, Neutrophil 54 %, PCT > 0.02 ng / ml. Nasopharyngeal swab was taken and it was positive for SARS-CoV-2 by RT-PCR, CT were normal. He was prescribed with multivitamins and healthy supplements orally. He got discharged on 5<sup>th</sup> May 2020 only after the SARS-CoV-2 test was negative by RT-PCR and advised to be under home quarantine for the next 14 days.

At the time of discharge, both patients of case 2 and case 3 were advised to take multivitamin tablets, vitamin C, ranitidine, and zinc for ten days. They were instructed for a further 14 days of home quarantine.

## DISCUSSION

This family cluster case report highlights the importance of intensive screening and epidemiologic survey.<sup>8</sup> This report suggests spread of infection between close contacts of the patient. Progression and development of symptoms may be related to age and immune status of the patients.<sup>9</sup> In this case report, the first and second patients had a history of diabetes mellitus, but only the first patient was symptomatic. The second and third patients had no symptoms. Screening of asymptomatic carriers for Covid-19 nucleic acid detection in outpatients will be instrumental in controlling the pandemic situation. Extensive screening of the individuals in the community is needed to identify Covid-19 patients for preventing the spread of infection by early identification of asymptomatic carriers.

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