

## **An Epidemic during Covid 19 Pandemic-Are we Prepared?**

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### **Article History**

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First case of outbreak of Covid -19 pandemic appeared in December 2019 in Wuhan, China. The World health organization (WHO) announced the pandemic in March 2020, by the month of August 2021, 200,840,180 confirmed cases including 4,265,903 deaths and a total of 3,984,596,440 vaccine doses have been administered.<sup>1</sup>

Various spectrums of manifestations of corona virus infection have posed a challenge for health care providers world wide and devastating effects on science, society and the planet.<sup>1</sup>

It now seems clear that Corona virus primarily affects respiratory organs and other systems could be correlated to the presence of Angiotensin Converting Enzyme receptors (ACE2). Cells with these receptors become target cells and inflammatory reactions occur due to interactions.<sup>2</sup>

As per the published literature till September 2020, the only oral manifestations of the Covid infection are loss of smell and taste sensation. These could be due to the direct effects of tropism of virus to tongue and oral mucous membrane.<sup>2, 3</sup> Later on there were emergence of secondary infections and various oral manifestations varying from ulcers to devastating fungal infections like mucormycosis.

Secondary infections are well recognized in infections like influenza, Severe Acute Respiratory Syndrome (SARS), Middle East Respiratory Syndrome related virus (MERS), and other viral diseases. But super infections and co infections in Covid-19 Pneumonia are still under exploration.<sup>4, 5</sup>

Covid-19 affected individuals continually have immune suppression with a decrease in CD4 and CD8 T cells, Critically ill patients, under treatment in Intensive care units and prerequisite mechanical stimulation

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or long duration of hospitalization. These patients are more likely to develop fungal infections. Hence middle and later stages of infections are crucial. There exists a dilemma still whether these manifestations are due to the direct effects of Covid 19 virus causing systemic health deterioration, possibility of opportunistic infections or adverse reactions to the treatments.<sup>5, 6</sup>

The mucormycosis infection is a rare fulminant opportunistic infection caused due to Saprophytic fungi and usually common after Candidiasis and Aspergillosis.<sup>7</sup> In April 2020, Martin Carreras-Presas<sup>2</sup> *etal*, published the first write-up on oral manifestations associated with Covid-19 infection; since then many publications have referred to the subject.<sup>7</sup>

Mucormycosis is usually associated with uncontrolled Diabetes mellitus, leukemia, lymphoma and injudicious use of steroids. Whether the severe Covid -19 infection is a substantial menace factor for the development of invasive fungal super infections or due to immune compromised status is of prodigious medical interest and remains as an open question for now.<sup>2</sup>

Now the numbers of mucormycosis infections in Covid-19 affected individuals are increasing. Till May 25<sup>th</sup> 2021, India has registered over 11,717 cases with maximum in Gujarat, Maharashtra and Andhra pradesh.<sup>8,9</sup> As per the directions by concerned Health Ministry, few states classify mucormycosis fungal infection as a notifiable disease under Epidemic Act 1897.<sup>8, 9</sup>

Since the mucormycosis affects head and neck region with the signs and symptoms like pain and swelling over the middle third of the face, discharge from the nose, stuffiness in the nose, mobility of the teeth, blurred vision, ulcer in the palate with denudation of bone in the palatal region, these patients will end up in the dental clinics seeking treatment for these problems. So the dental surgeons are the first ones to identify the disease in the initial stage where in the early diagnosis and prompt treatment will definitely help in the prevention of morbidity and mortality.<sup>7,10</sup>

Dentist should be a part of the multidisciplinary team along with ENT specialist, oral and Maxillofacial Radiologists, maxillofacial surgeon, neurosurgeon and ophthalmologist for diagnosis and treatment of these patients.<sup>5</sup>

It is imperative for an alert physician to recognize early for effective treatment and appropriate management of respiratory distress.

Present pandemic situation has prompted all of us not to take anything for granted. Clean, infection free facilities are utmost demanding at every level of work with technology has been a demand by our patients at our clinical setup. Though there are enough resources and capabilities to deliver high quality treatment, oxygen needs remained high. Some unrevealed failures could be related to the infection control and prevention of cross infection. Some drugs and standard operating procedures clearly lead to terrible consequences for some patients.

Previous estimation of clinical data will assist dental surgeons in attaining a valid clinical diagnosis. It is imperative to carry out meticulous clinical examination and identification of oral manifestations in Covid-19 affected patients.

I recommend it is prudent to evaluate risk factors, type of invasive mycosis, strengths and restriction of diagnostic techniques, clinical settings and need for standard or individualized treatment plan will give better results in terms of patient care.

The unprecedented upheavals have not receded yet, but the good news about the vaccines is providing the signs of hope for all of us. Here afterwards it is mandatory for all the practitioners to know about the

vaccination status of the patients. If they are not vaccinated, it's our moral responsibility to educate them about the effectiveness of vaccination to fight against Covid 19 pandemic and its subsequent oral manifestations.

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