

COVID 19 Aftermath - A Oral Health Care Provider Prospective

Sanjeev Malhotra¹ and Reena Sirohi^{2*}

¹MDS (Oral and maxillofacial surgery), Medical Officer, Shri Lal Bahadur Shastri Government Medical College and Hospital, Mandi at Nerchowk, H.P., India

²MDS (Prosthodontics), Senior Resident, Shri Lal Bahadur Shastri Government Medical College and Hospital, Mandi at Nerchowk, H.P., India

***Corresponding Author:** Reena Sirohi, MDS (Prosthodontics), Senior Resident, Shri Lal Bahadur Shastri Government Medical College and Hospital, Mandi at Nerchowk, H.P., India.

Received Date: 04-26-2020; **Published Date:** 05-11-2020

Copyright© 2020 by Sirohi R. All rights reserved. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Abstract

The outbreak of the coronavirus disease 2019(COVID-19) is a public health emergency of global concern. Based on the data published by Chinese Center for Disease Control and Prevention (China CDC), majority of patients were asymptomatic or having mild symptoms but can release enormous amount of viral load. It posed worldwide challenge for containment of the infection of COVID-19. As, oral health care providers work in close proximity to the patients' mouth, they are at higher risk for infection. Aim of this article is to emphasize on special measures to be taken for prevention and potential interventions.

Keywords

Outbreak; Coronavirus; Emergency; COVID-19

Introduction

A pneumonia of unknown cause was detected in Wuhan, China and was first reported to World Health Organization (WHO) on 31 December, 2019. It was declared as a public health emergency of international concern and named as new coronavirus disease 2019 (COVID-19). As per WHO report (April 22,2020), there have been 2.5 million cases and more than 1,60,000 deaths worldwide [1].

International committee on Taxonomy of viruses recognizes this virus as sister to severe acute respiratory syndrome coronavirus (SARS-CoV) and named it as SARS-CoV-2 [2].

Just like, SARS-CoV and Middle East respiratory syndrome coronavirus (MERS-CoV), SARS-CoV-2 is responsible for lower respiratory infection and may cause acute respiratory distress syndrome (ARDS) [3].

As, oral health care providers are at higher risk due to their close proximity with oral cavity. In this article, we summarize the features, routes of transmission, management of patients to be taken up by oral health care providers.

Sources and Routes of Transmission

COVID-19 can directly transmit from person to person through respiratory and salivary droplets or through contact and fomites [4]. To et al detected live virus in saliva of infected individuals by viral culture method [5].

Transmission from aerosol-generating procedures can also be expected, just like in case of other respiratory infections. As blood samples are also being used in laboratory diagnosis of the disease, contaminated blood can also transmit the virus. It is important to note that clinical presentations of the disease are dynamic i.e. asymptomatic, having mild symptoms or severe distress. In this context, it might be possible that oral health care workers can unknowingly treat patients with asymptomatic disease, as incubation period can range from 0-24 days [6,7].

Most of the dental procedures involve aerosol generation and handling of sharp instruments, which make such professionals highly prone to the infection.

Management of Patients and Infection Control

As COVID 19 is a novel virus, we do not have much literature on it. But there are certain immunocompromised professionals, who should avoid practice in near future, as the disease can lead to serious illness in such individuals.

1. Above 65 years of age
2. Underlying medical condition such as Diabetes mellitus, Chronic liver disease, Chronic lung, kidney and heart diseases [1].
3. Pregnant females [8].

Screening of patient

Initial screening of the patient should be done telephonically before scheduling appointment by asking some questions regarding any recent travel history to areas having high prevalence of disease, presentation of any symptoms of COVID 19 like fever, dry cough, myalgia.

There should be well ventilated area for patients with at least 6 feet distance between individuals and everyone should wear a surgical mask.

Pharmacological management

On arrival of the patient, a questionnaire should be given to the patient to confirm emergency treatment and his/her body temperature should be measured using contact free forehead thermometer [9]. In case patient is febrile, any elective treatment should be deferred. In case of emergency (severe tooth pain), only antibiotics and analgesics should be given for symptomatic relief.

Urgent Treatment Need

Adequate hand hygiene practice, proper donning of personal protective equipment (PPE) and pre-procedural mouth rinse with oxidative agents such as 1% hydrogen peroxide or 0.2% povidone to decrease microbe load are recommended before contacting the patient [9].

In case, radiograph is required, it is better to have extraoral imaging. Rubber dam isolation, anti-retraction devices and installation of negative pressure rooms are other essential requirements to prevent cross infection.

Proper Disposal of Biomedical Waste

This is also very important step to prevent transmission and cross infection. Waste like used PPE and disposable instruments used should be disposed in double-layered yellow package bags. Reusable instruments should be cleaned, sterilized and stored properly.

Discussion

At present, there is neither a validated treatment, nor a vaccine for COVID -19 and the main treatment strategy is symptomatic and supportive. However, many trials are going on like convalescent therapies (plasma of recovered patients), administration of antiviral drugs (lopinavir, ribavirin), antimalarial drugs (chloroquine and hydroxychloroquine) [10,11]. But no pharmacological products have been shown to be safe and effective yet for treatment of COVID 19. Therefore, it is of utmost importance to prevent spread of infection by using social distancing, hand hygiene, patient screening and infection control measures.

Conclusion

Post- covid 19 era is going to be very challenging for oral health care providers as they are at greater risk as compared to other professions in relation to COVID-19.

It is our suggestion that in order to contain the risk while treating not only infected but also asymptomatic patients, oral health care providers should test every patient prior to treatment, as it will prevent spread of infection to both oral health care providers and the patients they treat. So, during these challenging times, maintaining high infection control measures and rapid testing of the patients are of utmost importance to mitigate the spread of COVID-19 in health care professionals.

Acknowledgement

No conflict of interest.

References

1. Coronavirus disease 2019 (COVID-2019) situation reports. Geneva: World Health Organization, 2020 (<https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports/>).
2. Gorbalenya AE, Baker SC, Baric RS, Groot RJ, Drosten C, Gulyaeva AA. et al. Severe acute respiratory syndrome-related coronavirus: the species and its viruses- a statement of the coronavirus study group. *bioRxiv*. 2020.
3. Chen Y, Liu Q, Guo D. Emerging coronavirus: genome structure, replication, and pathogenesis. *J Med Virol*. 2020;92(4):418-423.
4. Wu A, Peng Y, Huang B, Ding X, Wang X, Niu P et al. Genome composition and divergence of the novel coronavirus (COVID-19) originating in China. *Cell Host Microbe*. 2020;27(3):325-8.
5. To KKW, Tsang OTY, Yip CCY, Chan KH, Wu TC, Chan JMC et al. Consistent detection of 2019 novel coronavirus in saliva. *Clin Infect Dis*. 2020.
6. Wu Z, McGoogan JM. Characteristics of and important lessons from the coronavirus disease 2019 (COVID-19) outbreak in China: summary of a report of 72 314 cases from the Chinese Center for Disease Control and Prevention. *JAMA* 2020.
7. Rothe C, Schunk M, Sothmann P, Bretzel G, Froeschl G, Wallrauch C et al. Transmission of 2019-nCoV infection from an asymptomatic contact in Germany. *N Engl J Med*. 2020;382:970-1.
8. Rasmussen SA, Smulian JC, Lednickey JA, Wen TS, Jamieson DJ. Coronavirus disease 2019 (COVID-19) and pregnancy: what obstetricians need to know. *Am J Obstet Gynecol*. 2020;(published online Feb 24).
9. Peng X, Xu X, Li Y, Cheng L, Zhou X, Ren B. Transmission routes of 2019-nCoV and controls in dental practice. *Int J Oral Sci* 2020;12:9.
10. Wu YC, Chen CS, Chan YJ. The outbreak of COVID-19: an overview. *J Chin Med Assoc*. 2020;83(3):217-20.
11. Wang M, Cao R, Zahng L, Yang X, Liu J, Xu M et al. Remdesivir and chloroquine effectively inhibit the recently emerged novel coronavirus (2019-nCoV) in vitro. *Cell Res*. 2020;30:269-71.