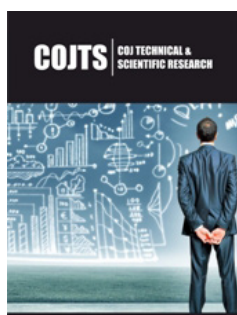


COVID-19 and The Oral Physician

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Opinion

The unending corona pandemic is spiraling us all into virologists, epidemiologists, futurologists and god only knows what. Throughout the passage of history, disease occurrences have ravaged the human race, many a times changing the course of history and, at some instances, indicating the end of entire civilizations. COVID 19 is not the first pandemic, and it will definitely not be the last. In fact, if statistics are correctly seen and interpreted death rate of COVID-19 is much less that that compared to Swine Flu in 2009-10 or Cholera outbreak (1817-1923), death due to tuberculosis and oral carcinoma is rampant and was in the headlines, till suddenly the COVID-19 wave took over. In fact, people are dying all around the world more due to lifestyle disease, comorbidities some of them overlapping COVID 19 fatalities. Only COVID 19 deaths are projected as the other deaths are allowed to be buried without much ado. More than the disease itself, the side effects of the so-called preventive measures are taking a higher toll on the population, rise in number of suicides, domestic violence, derailed education, decrease in public health services, maximum economic losses, pushing the world economy to the brink of depression and recession, which will catapult into more deaths than ever. COVID-19, caused by the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), has caused much apprehension and misperception in the community and affected the delivery of essential health care services, which includes dental care.

In spite of the fact that, dental emergency services are vital to the community in the time of the COVID-19 pandemic, government bodies and dental associations have advised to halt elective dental services and treat only patients requiring emergency dental procedures; this besides economic duress to the dentists also puts a heavy strain on critical health care resources. Besides life-threatening dental emergencies, such as uncontrolled oral bleeding, head and neck fascial space infection like Ludwig's angina, or facial trauma that may compromise the patient's airway, and patients with severe dental pain that cannot be controlled with over-the-counter drugs, other patients may congest hospital emergency rooms that are already overburdened with patients with COVID-19 or other medical emergencies. The pandemic resulted in serious financial problems faced by standalone dental offices, hospitals and healthcare operators. Dental interventions which are currently limited to urgencies and the management of patients has become expensive and unpredictable. Healthcare workers are facing serious financial challenges along with high risk of contracting the virus on working.

It is very important to remember that protection of dental patients and staff during COVID-19 is challenging due to the existence of patients who are infectious yet asymptomatic and hence development of guidelines is very essential. The incubation period of the virus is believed to be up to 14 days, Aerosol and fomite transmission of SARS-CoV-2 is plausible especially from asymptomatic carriers. Recently recovered patients can be potential virus

carriers for at least 30 days after the recovery confirmation by a laboratory test. It is thought that some virus strain can be present in saliva for as long as 29 days. Hence, it is very necessary to carry out screening procedures meticulously before treating a patient. Speaking from the oral physician point of view most of the procedures are non-aerosol generating, hence a pretreatment 0.23% povidone-iodine or any compatible recommended mouth wash which would reduce the viral load can be advised before starting any procedure. Use of disposable instruments will help reduce cross-infection. For the dental radiologist and general dentist, it is advisable not to take intra oral radiographs as this may cause excessive saliva and gagging with production saliva aerosols. It is advisable to take a panoramic radiograph or in some cases a CBCT.

There is a technique called Extra Oral Periapical Radiography [1] which could be used in emergency cases using the Intra Oral X-Ray Machine and Dental Intraoral film or sensor which are available in all dental clinics, hospitals, teaching, and research centers should shift to digital radiography and tele reporting. Important issues related to dental care and oral health should be taken as evidence supports that oral mucosa is an initial site of entry for SARS-CoV-2 and that oral symptoms, including, loss of taste and smell and dry mouth, could be the early symptoms of COVID-19, presenting even before fever, dry cough, fatigue, shortness breath, and other typical symptoms. Hence, Oral health researchers and oral physicians may play a more active role in early identification and diagnosis of the disease through interpreting the contrivances of dry mouth and loss of taste in patients with COVID-19.

Rapid testing for infectious diseases in dental offices using saliva samples may be valuable in the early identification of infected patients and in disease progress assessment and thus could be a future diagnostic and/or prognostic tool. That the oral cavity may play an active role in the pathogenesis of COVID-19, is highlighted by a Chinese study that showed a high expression of ACE2 receptors on the epithelial cells of the oral mucosa [2]. Taste organs are widely distributed in oral tongue, where 96% of the oral ACE2- positive cells reside. The sweet and salty perception of taste has been reported to be affected, with no change in sour perception. In light of the reports of these symptoms, American Academy of Otolaryngology-Head and Neck Surgery Foundation (AAO-HNS) has proposed adding loss of smell and taste; Anosmia and Dysgeusia. It is found that it is as accurate as a COVID-19 RT PCR test to diagnose COVID-19 infection and therefore should be added to the list of available screening tools for Covid-19 infection. It should be noted that the sensory return characteristically matches the time of disease recovery. Researchers have also found that persons who reported experiencing a sore throat more often tested negative for COVID-19 and these were more in number than those confirmed with initial symptom of Anosmia and Dysgeusia. The value of adding unexplained Anosmia as a potential official symptom of Covid-19. would allow earlier detection and isolation of potential carriers and improve safety for healthcare workers.

This probable use of saliva seems scientifically judicious as it has been shown to contain live COVID-19 viruses [3] containing a pool coming from the lower respiratory tract, nasopharynx and infected salivary glands (in some cases of the coronaviruses, infection of salivary glands occurs very early in the disease process). Unlike the other SARS virus diseases, the content of salivary COVID-19 (viral load) has been shown to be highest during the first week after symptom onset [4]. This highlights the role of saliva as a probable foundation of viral transmission and, as it can be detected in the saliva as long as 25 days after the onset of symptoms, its potential as use for monitoring viral clearance is important [5]. Using saliva samples has a number of clinical advantages, as it is less invasive and more convenient to patients when compared to Naso- and/or Oropharynx Swabs (NOS) or blood samples (especially in multiple testing for disease monitoring) [6]. With specific instructions, patients can collect saliva themselves, thereby reducing the risk of virus transmission to healthcare personnel and avoiding use of personal protective equipment. The drawback is that it should be collected before tooth brushing and breakfast, since nasopharyngeal secretions move posteriorly, and bronchopulmonary secretions move by ciliary activity to the posterior oropharyngeal area, while the patients are in a supine position during sleep [5].

And lastly, not all patients can easily provide sputum with respiratory secretions. The presence of ACE2 receptors in oral tissues (buccal and gingival epithelial cells) suggests that it is biologically plausible for the oral cavity to be the initial site of entry for SARS-CoV-2. The SARS- CoV-2 cellular entry receptor ACE2 was found in various oral mucosal tissues, especially in the tongue and floor of the mouth. The COVID-19 pandemic has brought about tremendous changes in our lifestyle and daily routine. Lockdown periods if not approached positively, may lead to immense mental stress, agony and depression. This stress affects every system of our body, and the stomatognathic system is not an exception. There are many stress-related dental problems- to name a few; Bruxism or Teeth grinding, Aphthous Ulcers, Dry Mouth (Xerostomia), Jaw joint pain- TMJD, Oral Lichen Planus, Periodontal disease. The role of Evidence Based Dentistry cannot be emphasized. The list of to dos and not to dos is endless; the decision should be individual without fear. We as Dentists have come out with excellence through the Syphilis Infections, AIDS era, SARS pandemic and this COVID-19 too will pass. All we need is fortitude, rational thinking, and adapting feasible and affordable safety measures. Just put your right hand over your heart and say aloud, "All is Well- We Will Make It".

References

1. Mishra I, Freney RK, Sansare K, Chandra AD, Shahnaz ST, et al. (2018) Diagnostic value of extraoral periapical radiograph in comparison to intraoral periapical radiograph: A cross-sectional, institutional study. *Contemp Clin Dent* 9(3): 406-409.
2. Xu H, Zhong L, Deng J, Peng J, Dan H, et al. (2020) High expression of ACE2 receptor of 2019-nCoV on the epithelial cells of oral mucosa. *Int J Oral Sci* 12: 1-5.
3. To KWK, Tsang O, Yip CCY, Kwok Hung C, Tak Chiu W (2020) Consistent detection of 2019 novel coronavirus in saliva. *Clin Infect Dis* 71(15): 841-843.

4. Sabino Silva R, Jardim ACG, Siqueira WL (2020) Coronavirus COVID-19 impacts to dentistry and potential salivary diagnosis. *Clin Oral Investig* 24(4): 1619-1621.
5. To KKW, Tsang OTY, Leung WS, Anthony RT, Tak Chiu W, et al. (2020) Temporal profiles of viral load in posterior oropharyngeal saliva samples and serum antibody responses during infection by SARS- CoV-2: An observational cohort study. *Lancet Infect* 20(5): 565-574.
6. Xie C, Jiang L, Huang G, Pu H, Gong B, et al. (2020) Comparison of different samples for 2019 novel coronavirus detection by nucleic acid amplification tests. *Int J Infect Dis* 93: 264-267.

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