J Oral Med Oral Surg 2020;26:22
https://doi.org/10.1051/mbcb/2020030

https://www.jomos.org

JOMOS
Journal of Oral Medicine and Oral Surgery

Letter to the Editor

Challenges and mental health issues faced by dental health care personnel during COVID-19 pandemic and beyond – the way ahead

Ankita Kar[1,*], Udayan Bhaumik[2], Haritma Nigam[3], Vishal U. S. Rao[4]

[1] Department of Head and Neck Onclogy, Health Care Global Cancer Center, Bangalore, India
[2] Department of Psychiatry Pramukhswami Medical College, Anand, Gujarat, India
[3] Pacific Dental College and Research Center, Udaipur, India
[4] Department of Head and Neck Onclogy, Health Care Global Cancer Center, Bangalore, India

(Received: 19 June 2020, accepted: 6 July 2020)

The current pandemic, attributed to a novel severe acute respiratory syndrome coronavirus 2 (SARSCoV2) better known as COVID-19, has affected dental practice, like all other medical services. This virus strain bears a striking resemblance to viruses like SARS-CoV and Middle East respiratory syndrome coronavirus (MERS-CoV). The transmission was first reported from the wet market in Wuhan, China [1]. Initially, the transmission was the animal-to-human transmission, but later human-to-human transmission was noted.

Both symptomatic and asymptomatic patients spread the virus, but the latter may act as super-spreaders, as they do not have symptoms and remain active in the community. The incubation period of COVID-19 is reported to be 5 to 6 days, with up to 14 days, and this is widely used as cut off days for medical observation and quarantine [2].

The role of Dental health care personnel (DHCP) in preventing the transmission of COVID-19 is critically essential [3].

The British Dental Journal (BDJ) team advises all dental practices should establish a remote urgent care service, providing telephone triage for their patients with urgent needs during usual working hours, and whenever possible treating with: (1) advice, (2) analgesia, (3) antimicrobial means where appropriate [4].

In the current scenario, the lockdown imposed worldwide has brought about many restrictions in the routined discharge of services by DHCP. One significant worry is the avoidance of dental clinics and procedures by patients due to the fear of contracting the virus and also public perception of COVID-19. This is likely to lead to financial crisis [3], concern for family and job stress. It may lead to significant psychological distress among DHCP. We write this paper to discuss the role of DHCP in this pandemic and how they may experience psychological concerns.

Psychological distress among DHCP during COVID-19 pandemic

Mental health issues among health care workers (HCW) in COVID-19 situation has been well-documented [5]. Various contributory factors include social and physical distancing, fear of contagion, increased need for infection control procedures, fear of contagion, concerns for self/family wellbeing, prevalent cynicism, decreased access to personal protective equipment (PPE), along with issues of financial insecurity and potential loss of income [6].

DHCP is at higher risk to encounter the cross-infection because of employment of high-speed rotary instruments generating a large volume of aerosols and splatter of saliva, during treatment, increasing the probability of nosocomial spread of COVID-19 [7].

Kumar et al. assessed the various stressors among Indian endodontists and its correlates. They concluded that during the lockdown, 50% of Indian endodontists had distress, as measured by COVID-19 Peri-traumatic Distress Index (CPDI) and 80% of them had perceived stress [2].

Khanager et al. evaluated the association of COVID-19 factors and psychological factors with psychological distress among DHCP and the COVID-19 pandemic outbreak. Their results revealed that high psychological distress was found

* Correspondence: drankita.k@hcgel.com

among those who have background illness, fear of contracting COVID-19 from the patient, and a higher subjective overload [8].

Neuropsychiatric manifestations of COVID-19

Neuropsychiatric manifestations have been reported in past outbreaks of coronavirus, including acute respiratory infections and severe acute SARS. Postulated mechanisms include direct viral invasion of the brain and autoimmune response of the central nervous system of the virus. Various presentations which have been documented are cognitive deficits, strokes, toxic encephalopathies and polyradiculopathies similar to Guillain-Barré syndrome (GBS) and Acute inflammatory demyelinating polyneuropathy (AIDP) [9]. These syndromes are known to present with psychological disturbances as a reactionary response to the illness.

In the past SARS, outbreaks from China, significant emotional distress was observed in almost 50% of HCW [8]. The current situation is further worsened by the information overload on social and mass media platform.

Post-traumatic stress disorder (PTSD) among DHCP amidst COVID-19 pandemic

Khanager et al. observed that the most common psychiatric disorder associated with the COVID-19 pandemic was post-traumatic stress disorder (PTSD). The presence of PTSD further worsens the prognosis of the psychological disturbances likely to be faced by DHCP.

The stigma and rejection concurrently faced by DHCP while practising further impedes recovery from their psychological challenges [8].

The results from a study reported on the mental health outcomes among HCW attending to COVID-19 patientsin hospitals in China were alarming. Half of the study population reported symptoms of mental depression, anxiety, and insomnia. In total, 70% of the study population also reported psychological distress [10].

A thorough and detailed understanding of the etiopathogenesis of PTSD sheds light on the importance of HCW in the society and the pivotal role they play during life-threatening pandemic outbreaks.

Diminished size of the hippocampus is probably both a predisposing factor and is a result of trauma. In patients with PTSD, the amygdala, which is involved in processing emotions and modulating the response to fear, seems to be overly reactive. The medial prefrontal cortex (mPFC), which exhibits inhibitory influence over the amygdala's stress response and emotional reactivity, tends to be smaller in individuals with PTSD, and less sensitive [11].

Changes in neurotransmitter function and neurohormonal function have also been reported. PTSD patients tend to have normal to low circulating levels of cortisol despite their ongoing stress and elevated levels of Corticotropin-Releasing Factor (CRF) [11].

Current lack of definitive treatment options for COVID-19 may mean the need to practice social restrictions even in the aftermath of the pandemic. The challenges faced by the DHCP mean that substantial scale adaptations are required in dental practice to prevent nosocomial infection to patients. These can be arranged in the through intensive infection control programs like safe injection practices, oral hygiene and availability of high-quality PPE. Professional mental health services should be made easily accessible to DHCP to support them and provide treatment for any mental health disturbances which may arise during this time or in the foreseeable future.

Conflicts of interests: The authors declare that they have no conflicts of interest in relation to the publication of this article.

References

1. Lescure F-X., Bouadma L, Nguyen D, Parisey M, Wicky P-H., Behillil S, et al. Clinical and virological data of the first cases of COVID-19 in Europe: a case series. Lancet Infect Dis. 2020;20:697–706.
2. Anil Kumar RN, Karumaran SC, Kattula D, Thavarajah R, Anusa AM. Perceived stress and psychological (dis) stress among Indian endodontists during COVID19 pandemic lock down. medRxiv. 2020. https://doi.org/10.1101/2020.05.06.20092601
3. Coulthard P. Dentistry and coronavirus (COVID-19)-moral decision-making. Br Dent J 2020;228:503–505.
4. Hammett E. COVID-19 in dental settings. Br Dent J Team 2020;7:10–11.
5. Greenberg N, Docherty M, Gnanapragasam S, Wessely S. Managing mental health challenges faced by healthcare workers during covid-19 pandemic. Br Med J. 2020;368:m1211.
6. Gavin B, Hayden J, Adamis D, McNicholas F. Caring for the psychological well-being of healthcare professionals in the Covid-19 pandemic crisis. Ir Med J. 2020;113:51.
7. Ather A, Patel B, Ruparel NB, Diogenes A, Hargreaves KM. Coronavirus disease 19 (COVID-19): implications for clinical dental care. J Endod. 2020;46:584–595.
8. Khanagar SB, Al-Ehaideb A, Vishwanathaiah S, Maganur PC, Varadarajan S, Patil S. Depression, anxiety, and psychological distress among health-care providers during the outbreak of the life-threatening coronavirus disease (COVID-19). J Contemp Dent Pract 2020;21:471–472.
9. Rogers JP, Chesney E, Oliver D, Pollak TA, McGuire P, Fusar-Poli P, et al. Psychiatric and neuropsychiatric presentations associated with severe coronavirus infections: a systematic review and meta-analysis with comparison to the COVID-19 pandemic. Lancet Psy. 2020;7:611–627.
10. Lai J, Ma S, Wang Y, Cai Z, Hu J, Wei N, et al. Factors associated with mental health outcomes among health care workers exposed to coronavirus disease2019. JAMA Network Open 2020;3: e203976-e.
11. Bailey CR, Cordell E, Sobin SM, Neumeister A. Recent progress in understanding the pathophysiology of post-traumatic stress disorder. CNS Drugs 2013;27:221–232.