Incidence and Pattern of Patient-Perceived Oral Medicine Emergencies during Lockdown: Experience of Tertiary Health Care Centre of Eastern Nepal

Regmee P, Adhikari S, Sulu S, Rimal J, Maharjan IK

Department of Oral Medicine and Radiology

College of Dental Surgery,

BP Koirala Institute of Health Sciences,

Dharan, Nepal.

Corresponding Author

Pragya Regmee

Department of Oral Medicine and Radiology,

College of Dental Surgery,

B. P. Koirala Institute of Health Sciences,

Dharan, Nepal.

E-mail: mailpragyareg@gmail.com

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ABSTRACT

Background

There has been a significant drop in the number of patients seeking oral medicine care during the lockdown period.

Objective

To find the incidence and pattern of patient perceived oral medicine emergencies in the tertiary healthcare centre of eastern Nepal, during the lockdown period.

Method

The clinical profile of patients seeking oral medicine care between 30th April 2021 to 25th June 2021 (period of strict lockdown in Sunsari district) was recorded. Data were recorded in an excel sheet and transferred to Statistical Package for the Social Sciences version 11.5. Frequency and proportion were calculated.

Result

During the lockdown, 300 patients had visited the hospital with different oral diseases seeking the care of an oral physician. The average number of patients seeking oral medicine care per day was approximately six. Of the total patients, 110 patients had pain as their chief complaint, 48 had wound and 34 had a burning sensation in the mouth. Among them 82% perceived their complaint as an emergency. The provisional diagnosis was temporomandibular disorders in 40 patients, trigeminal neuralgia in 38 patients and 34 had carcinoma.

Conclusion

Patients seeking oral medicine care during the lockdown period had decreased by about one-third. Pertaining to oral medicine, pain in any orofacial area was the most common patient perceived emergency condition followed by wound and burning sensation. Maximum number of patients visiting the department perceived their complain as an emergency.

KEY WORDS

COVID-19, Emergency, Lockdown, Nepal, Oral medicine

INTRODUCTION

The outbreak of Corona virus disease 2019 (COVID-19), caused by Severe Acute Respiratory Syndrome CoronaVirus-2 (SARS-CoV-2), in Wuhan, Hubei Province, China has been a pandemic that is changing history.[1] As human civilization is mounting, this disease is trying to strike them down. There is no second thought that it has affected the physical, psychological, economic, and social lives of many people.[1]

Like in many other health sectors, dentistry has also been severely affected. Studies have shown that there has been a decrease in the number of patients seeking professional care in a dental office or a change in the structure of disease types in comparison to pre-COVID time.[2,3] During the first COVID wave in 2020, all the semi-essential and non-essential dental services were shut down in most parts of the world. Slowly dental hospitals started to reopen with strict measures of personal protective equipment. These recommendations for dental setups are still in place for most of the parts of the world.[4,5] With the start of the second COVID-19 wave in Nepal, the dental services are yet again negatively affected but the modalities of restrictions have changed. Both of the concerned parties, patients and dentists, are trying hard to adapt to the "new normal".

The first and most important problem that is associated with COVID-19 is the easy spread of viral agents in the air during dental examination or procedure.[6] Like with any other specialty, oral medicine has also not been able to elude the situation completely. Among the different streams within dentistry, oral medicine seems to have a lesser impact due to COVID-19 as tele-consultation services can be utilized well to serve the patients having complains related to the oral mucosa with the pharmacological treatment plan.[7,8]

Thus, the aim of this audit was to find the incidence and patterns of patient perceived oral medicine emergencies in the tertiary healthcare centre of eastern Nepal, during the lockdown period imposed by the government due to the COVID-19 pandemic, in the year 2021. Any life-threatening conditions which require immediate intervention to save the life of patients or oral and maxillary infective conditions or any condition causing severe pain, discomfort, or loss of function to the patient were considered as oral emergencies.

METHODS

During the second wave of COVID-19 in Nepal, strict lockdown with different modes of restriction was implemented in Sunsari district from 30th April 2021 to 25th June 2021. This was a prevalence audit done in the department of Oral Medicine and Radiology in the College of Dental Surgery at B. P. Koirala Institute of Health Sciences.

All the data of patients seeking oral medicine care in the department were recorded. The details extracted were date of visit, patient ID, name, age, gender, address, chief complaint, mode of visit (new case/ follow-up case or visit for a procedure), and provisional diagnosis of the patients.

Data were recorded in an excel sheet and transferred to Statistical Package for the Social Sciences version 11.5. Frequency and proportion were calculated.

RESULTS

During the period of strict lockdown of 48 working days, there were 1778 patients. Among the patients, 1478 had odontogenic or periodontal complains. Remaining 300 patients had visited the hospital with different oral diseases seeking the care of an oral physician.

The average number of patients seeking oral medicine care per day, during the lockdown period, was 6.25. There were 98 patients aged less than 35 and 202 patients aged ≥ 35. Mean age of the total patients was 43.6 (+ 16.86) years. Total numbers of female patients were 142 (47.3%) while total numbers of male patients were 158 (52.7%). Hundred and sixty-six (55.3%) were new cases while, 134 (44.7%) were follow-up cases. Figure 1 shows the various areas from which patients had come for consultation.

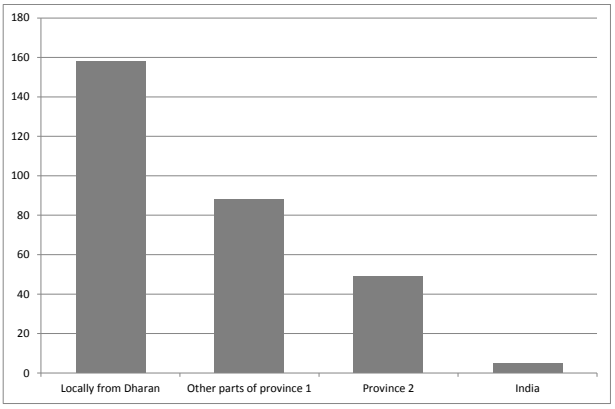

Figure 1. Various locations from which patients visited our department

Table 1 shows the chief-complains with which patients presented to the department. Majority of the patients had pain as their chief complaint, followed by wound and burning sensation in mouth. Among these group of patients 82% perceived their complain as an emergency while 18% did not perceive their complain as an emergency.

Table 1 also depicts the provisional diagnosis of these patients. Majority had temporomandibular disorders, followed by trigeminal neuralgia and carcinoma of different parts of the oral cavity.

Table 1. Chief complain and provisional diagnosis of the patients.

Chief Complain			
Abnormal sensation	4	Loss of taste	3
Bleeding gums	2	Pain	110
Burning sensation in mouth	34	Redness of gum	6
Dry mouth	4	Swelling	37
Inability to close mouth	6	Trauma	6
Inability to move the face	3	Treatment procedure	14
Limited mouth opening	9	White patch in mouth	12
Loose teeth	2	Wound	48
Provisional Diagnosis			
Angioedema	2	Lipoma	6
Angular cheilitis	4	Mucocele	4
Aphthous	12	Mucormycosis	2
Atypical facial pain	8	Oral Lichen Planus	14
Bell's Palsy	6	Oral fibroma	8
Burning mouth syndrome	6	Oral dysesthesia	2
Bony spicule (post-extraction)	2	Oral pemphigus	4
Carcinoma	34	Oral submucous fibrosis	32
Candidiasis	10	Pericoronitis	4
Coagulopathy	2	Post-traumatic neuropathy	6
Fracture	6	Space infection	14
Hemangioma/vascular malformation	6	Temporomandibular Disorder	40
Hyperparakeratotic epithelium	2	Temporal arteritis	2
Hyposalivation/Xerostomia	4	Trigeminal neuralgia	38
Idiopathic thrombocytopenic purpura	2	Traumatic ulcer	2
Leukoplakia	10	TMJ dislocation	6

DISCUSSION

It has been established that SARS-CoV-2 has higher rate of transmissibility in comparison to previous coronavirus outbreaks, such as the 2002 Severe Acute Respiratory Syndrome CoronaVirus (SARS-CoV) and the 2012 Middle East respiratory syndrome - CoronaVirus (MERS-CoV). It could be because of this reason that, though people are abiding by the several guidelines published by the Centre for Disease Control (CDC) for the prevention of infection in the public, the virus continues to spread around the world.[1,6,9] This continuous upsurge of infection has affected the number of patients seeking professional medical or dental care in many parts of the world.[2,10]

Comparing the average number of patients visiting our out-patient section with the time prior to 2019 pandemic, there has been about one-third decrease in the patient visits. Both the groups of patients, with odontogenic complain and with mucosal complains, have decreased significantly. However, the clinical profile of these patients is almost similar to the time prior to the pandemic.

During the time of this lockdown, a greater number of male patients had visited our hospital. While comparing this with the patient presentation in the pre-COVID times, the gender distribution was found to be of similar nature. Our hospital being located in Dharan sub-metropolitan city, it is logical that a greater number of patients from, in and around Dharan would visit the centre. We had a similar kind of experience during the lockdown period. Despite this nature of movement restriction, we had five patients from India, few new cases and few follow-up cases.

Overall, the clinical profile seen in our out-patient section was similar to the patient profile of another audit done in India by Gupta et al.[11] Their hospital had a greater number of patients in the age group of 35 to 42, with a greater number of males seeking professional care. This was similar to our experience during lockdown. Their audit was done to find the impact of COVID on utilization of overall dental services, where majority of the patients had endodontic emergencies like pulpitis, symptomatic alveolar abscess, symptomatic apical periodontitis and failed root canal treatments.

With the understanding that patient could not visit our hospital during the strict lockdown period, unless there was a perceived notion of emergency, we also wanted to explore on the most common oral medical emergencies patients encountered. While discussing about the chief complain, maximum number of patients had pain as their main concern and the most common "patient perceived" oral medicine emergency was TMD. This finding favours the scientific fact that TMD is the most common orofacial pain condition of non-dental origin. It has also been suggested by a recent systematic review done in Australia.[12] Followed by pain, patient had wound and burning sensation in mouth as their most common chief complain. When focusing on the diagnosis aspect, the second most common oral disease in our centre was trigeminal neuralgia followed by oral carcinoma. Though all the complains with which patients visited our hospital cannot be categorized as oral or dental emergencies, patient perceived those conditions as emergencies mostly because either they were in pain or they had a visible change, i.e., ulcer in their oral mucosa with functional limitation. As per departmental protocol implemented for COVID-19, needful treatments were provided to all the patients.

During this period, we also came across two cases of mucormycosis, post COVID-19 infection. Both of these cases had loose maxillary posterior teeth as their presenting symptom after about 2 weeks of resolution of the corona virus infection. According to scientific literature, mucormycosis is a rare fungal infection with an incidence of 0.005 to 1.7 per million population.[13] However, its incidence has significantly increased during the second wave of COVID-19 in India. Unfortunately, there is no reported true incidence of mucormycosis in COVID-19 patients.[13]

In the light that saliva can be a potential source of infection and transmission of COVID-19 virus, we should always take adequate recommended precautions.[6,14,15] Taking this point into consideration, though some odontogenic procedures producing aerosols are categorized as very high-risk procedures, we should avoid panicking in every situation because many mucosal procedures possess low to medium risk. It has been recommended that examination of the oral cavity poses medium risk, reduction of dislocated TM joint poses low risk, and biopsy and other minor oral mucosal procedures also possess low risk.[5] Hence, the available oral health promoting services should be optimally used following all the necessary measures of precautions. The morbidity or mortality of patients with other oral diseases should not increase because of the ongoing pandemic.

Since this was a single centre-based prevalence audit, the data does not give the clear idea of epidemiology of prevalent oral diseases in the area. To generate such evidence we recommend a prospective, longitudinal, multicentric study. This generated evidence can be used to formulate policies regarding oral medicine care in the context of COVID-19.

CONCLUSION

COVID-19 has decreased the utilization of dental or oral services, although all the oral procedures do not possess a high risk to viral transmission. Patients seeking oral medicine care during the strict lockdown period had decreased by about one-third. We received maximum of male patients and patients above the age of 35 years during this period. Pain in any orofacial area was the most common patient perceived emergency condition pertaining to oral medicine. Maximum number of patients visiting the department perceived their complain as an emergency. TMD was the most common provisional diagnosis of the patients.

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