



Oral manifestations in COVID-19-An overview

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Abstract

COVID19 has produced a pandemic that is still going strong. Angiotensin-converting enzyme 2 (ACE2) has been identified as a important receptor for COVID-19, which is expressed in minor salivary glands in the oral cavity. Dysgeusia (taste disorder), oral discomfort, autoimmune disease aggravation, and herpes simplex virus (HSV) and varicella zoster virus (VZV) infections are among the most prevalent symptoms in the oral cavity. Ulcerations and aphthous stomatitis are also reported. There is still no consensus on whether the oral symptoms are disease presentations or the result of a lack of immune response. As a result, more research on this topic is required.

Keywords: COVID-19; Oral; aphthous; angiotensin-converting enzyme 2 receptor

INTRODUCTION

There has been a lot of discussion about Novel Corona virus disease 2019 (COVID 19) because there are still many facts concerning this virus are unknown, and new information is being released every day, every minute, changing diagnostic and therapeutic methods.¹ While the majority of cases are asymptomatic or have moderate symptoms, a small percentage of them develop severe respiratory symptoms, leading to acute severe respiratory distress (ASRD) and, in some cases, multiple organ failure.²

Furthermore, clinical orofacial symptoms in COVID-19-positive patients have been observed in more recent research, including oral ulcerative lesions,⁶ vesiculobullous lesions, and acute sialadenitis.^{3,4} Dentists must be able to recognize the orofacial features of COVID-19 in order to detect the disease early and avoid transmission.⁵

The goal of this review was to compile the available evidence and provide an overview of COVID-19's potential orofacial symptoms, as well as the consequences for dental practitioners.

EARLY SYMPTOMS OF COVID 19:

The symptoms are common to other viral infections include fever, headache, sore throat, shortness of breath, dry cough, abdominal pain, vomiting, and diarrhoea.⁶

ADVANCED SERIOUS SYMPTOMS OF COVID 19:

COVID-19 can cause acute respiratory distress syndrome (ARDS) with or without cardiogenic and distributive shock. Pneumonia may emerge as a secondary symptom as the VIRAL LOAD increases. Acute parotitis is a painful swelling of the PAROTID GLANDS that occurs suddenly.^{7,8}

Pathogenesis in development of oral lesions in COVID 19

Coronavirus enter human cells via the receptor angiotensin converting enzyme 2 (ACE2), as revealed by scRNA-seq data processing. The study revealed organs that are at risk and prone to infection with the

severe acute respiratory syndrome coronavirus 2 (SARSCoV2), such as the lungs. As a result, cells with a high ACE2 receptor distribution can become virus host cells, causing inflammation in adjacent organs and tissues such as the tongue mucosa and salivary glands.⁹

ORAL MANIFESTATIONS OF COVID 19

Oral manifestations are ulcer, erosion, bulla, vesicle, pustule, fissured or depapillated tongue, macule, papule, plaque, pigmentation, halitosis, whitish areas, hemorrhagic crust, necrosis, petechiae, swelling, erythema, and spontaneous bleeding.^{10,11}

The most common site being tongue (38%), followed by labial mucosa (26%), palate (22%), gingiva (8%), buccal mucosa (5%), oropharynx (4%), and tonsil (1%).^{12,13}

At the same time, the diagnosis of herpetic lesions, candidiasis, vasculitis, Kawasaki-like, EM-like, mucositis, drug eruption, necrotizing periodontal disease, and necrotizing periodontitis should not be overlooked. ^{14,15}

Discussion

Dengue fever, herpangina, human herpes virus (HHV) infections and measles are all viral disorders that can cause enanthema. Both keratinized and non-keratinized mucosa can be involved. Both keratinized and non-keratinized mucosa can be involved. ^{4,6}

According to Biadsee and colleagues, patients with positive RT-PCR test had plaque-like changes on the dorsum of the tongue. Moreover, oral lesions emerged in patients at the same time as loss of taste and smell. Oral lesions were more severe and extensive in older patients and COVID-19 patients.¹⁶

Emodi-Perlman et al. recently stated that temporomandibular joint and muscles are also involved in COVID-19. The authors demonstrated that the global situation had increased anxiety and caused a surge in temporomandibular disorders and bruxism. ^{5,17}

Conclusion

Though COVID 19 had modest to severe symptoms and a high death rate, the authors established that the global situation had increased the incidence of worry. Early detection and action can significantly reduce mortality and save lives. Oral symptoms may be a

primary or secondary symptom of the underlying illness. Treating the symptoms will help to relieve the pain and improve the condition's alleviation. Oral signs might be viewed as a primary symptom that should be dealt appropriately. The importance of dental hygiene and a thorough investigation of early symptoms should be emphasized. Good dental hygiene and prophylaxis are essential for the prevention of any related lesion. Keeping a close eye on symptoms and managing them effectively could be really beneficial.

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